# THE ATHENÆUM

Journal of English and Foreign Literature, Science, and the Fine Arts.

No. 887. LONDON, SATURDAY, OCTOBER 26, 1844. PRICE FOURPENCE (Stamped Edition, 5d.

For the convenience of Subscribers residing in remote places, the weekly numbers are reissued in Monthly Parts, stitched in a wrapper, and forwarded with the Magazines.—Subscriptions for the Stamped Edition for the Continent, for not less than Three Months, and in advance, are received by M. BAUDRY, 3, Quai Malaquais, Paris, or at the Publishing Office, 14, Wellington-street North, Strand, London. For France, and other Countries not requiring the postage to be paid in London, 28fr. or 1l. 2s. the year. To other Countries, the postage in addition. [JAMES HOLMES, TOOK'S COURT, CHANCERY LANE.]

*LONDON, SATURDAY, OCTOBER 26, 1844.*

## REVIEWS

*The Star of Atthéghéi; The Vision of Schwartz; and other Poems.* By Frances Brown. Moxon.

Our readers have already made acquaintance with the poetry of Miss Brown, in the pages of the *Athenæum*,—a circumstance which must dispense us from all attempt at criticism on the present occasion. It is not that any arguments which we might use for recommending this volume could properly, for that reason, be held as otherwise than impartial; because our judgment on the author's poetry had, of course, preceded its introduction into our own columns, and was expressed by that fact. Still, as the language of commendation from us would, therefore, be but the re-statement of a "foregone conclusion," we will prefer leaving the merits of the volume to be canvassed by others, and rather avail ourselves of the opportunity of bringing before our readers some facts connected with the personal history of the poetess, which will, we think, increase such interest as they may have already felt in her poetry. They who, like ourselves, have found fine meanings and melodious expressions in the various lyrics that have, from time to time, appeared in our numbers under the signature of "Frances Brown," have not known, like ourselves, in how barren a place she found, and amid what impediments she has cherished, her gift of song. These facts are now, chiefly from the communication and in the language of the poetess herself, woven into an editorial preface which introduces the volume; and we agree with the editor in thinking, that the narrative has a poetry of its own, which reflects itself upon the poetry of the text:—

"The plea of circumstance" he says, "is not admissible in the critic's court,—but is rarely without its influence in other quarters. The critic's office is strictly judicial, and requires him to separate the fact on which he has to decide from all the accidents that may have shaped it;—but the ordinary and irresponsible judgments of men are apt to measure merit in relation to the circumstances amid which it grew. The flower that has struggled into beauty under unfavourable conditions of air and light, testifies to more than common vigour in the soil whence it sprang:—and they whose sense has, first, been secured by the absolute claims of a work of art, are, for the most part, willing to add something to their admiration, on the score of any peculiar difficulties under which it may have been achieved."

To that principle, then, as we are not to speak with the authority of critics, we will address ourselves in this notice,—seeking, like the editor, to "add the merit of the author's tale to the merit of her poetry;"—but also, like him, doing so only because they can be taken "in that order;" because the reader can be referred "to the poetry *first*, which speaks of her mind," and then asked to "turn to the tale, that tells of her life." The Editor observes—

"The story of Miss Brown's mental education, is well worth telling—both for its own interest and for its example. It is at once curious and instructive to watch a strong mind developing itself under conditions of social and physical disadvantage so great,—groping, by the aid of its poetic instincts, through the darkness of which it was conscious,—appropriating to itself everything whence it could draw nourishment, in the barren elements by which it was surrounded,—fastening upon all that could help it onward, while, by its own undirected energies, it was struggling upwards to the light."

The poetess is of humble birth, and first saw the light at Stranorlar, a small village in the county Donegal (where her father then was, and still is, postmaster) eight-and-twenty years ago,—and *for the last time*, only eighteen months later. At that tender age, the small-pox, visiting her in its severe form, consigned her to the blindness amid which she has had to work her way to all her intellectual treasures,—adding the loss of the most important of the senses in youth to the difficulties of a remote and unfurnished position. How by devices of her own—the promptings of a clear natural intellect,—by what processes of self-training—she learned to see into the world of thought, when the visible world was closed against her, and made the unpromising soil about her yield intellectual fruit, it is pleasant to learn in the words of her own simple narration. Her early calamity Miss Brown does not remember;—so, the forms of the outer scene have not followed into her world of meditation, to vex her with their dim shadows. The hues and shapes of actual things, as they present themselves to the sense which she has lost, are, happily, for her an utter blank—even to memory; and she has thus been saved that (in her case life-long) perplexity of the mind, born of the vain attempt to renew fading impressions and restore the image of a far and doubtful past,—something of which they have felt who have striven in vain to summon back into the field of memory the refractory spirits of a dream. Her mind has thus been left more clear to act in the conditions to which it was limited, and her fancy undisturbed by an irritating effort and a vain regret. "Indeed," says Miss Brown, "I recollect very little of my infant years," at all:—

"I never received any regular education,—but very early felt the want of it; and the first time I remember to have experienced this feeling strongly was about the beginning of my seventh year, when I heard our pastor (my parents being members of the Presbyterian church) preach for the first time. On the occasion alluded to, I was particularly struck by many words in the sermon, which, though in common use, I did not then understand; and from that time adopted a plan for acquiring information on this subject. When a word unintelligible to me happened to reach my ear I was careful to ask its meaning from any person I thought likely to inform me—a habit which was, probably, troublesome enough to the friends and acquaintance of my childhood: but, by this method, I soon acquired a considerable stock of words; and, when further advanced in life, enlarged it still more by listening attentively to my young brothers and sisters reading over the tasks required at the village school. They were generally obliged to commit to memory a certain portion of the Dictionary and English Grammar, each day; and by hearing them read it aloud frequently for that purpose, as my memory was better than theirs (perhaps rendered so by necessity), I learned the task much sooner than they, and frequently heard them repeat it."

"The whole of this narrative," says the editor, after having exposed the barrenness of the spot from which Miss Brown started in her pursuit of knowledge, and the way in which the craving for it arose,—"is, it will be seen, full of useful morals and appeals to the sympathies of the right-minded. It furnishes a striking example of the way in which the absence of the gifts denied may be compensated by a right use of the gifts that are left, and a position of apparent barrenness compelled into the yielding of abundance. For the acquisition of the intelligent graces, no lot could well seem more hopeless than Miss Brown's at the outset of her mental life, as stated in the above simple paragraph. De Foe's castaway was not more apparently helpless and companionless on his desert island, than this young girl, cut off by her calamity from the peopled world of vision, and left to an intellectual loneliness whose resources she had none to help her in finding out. The hint given by the preaching of the pastor was the first 'footprint left on the sand' of her desolate place, by the native genius which she afterwards reclaimed and made a friend of, and educated, till it did her precious service and pointed out to her all the fruitful places of her solitude. It 'showed her the best springs,' and 'plucked her berries' in that seeming waste;—filling it with occupations, and peopling it with friends, that smiled upon her darkness, like the forms of the unknown world which dawned upon the inexperience of Miranda:—

> How many goodly creatures are there here!
> . . . . . O brave new world,
> That has such people in't!"

"My first acquaintance with books was necessarily formed amongst those which are most common in country villages. *Susan Gray—The Negro Servant—The Gentle Shepherd—Mungo Park's Travels*—and, of course, *Robinson Crusoe*—were among the first of my literary friends;—for I have often heard them read by my relatives, and remember to have taken a strange delight in them, when I am sure they were not half understood. Books have been always scarce in our remote neighbourhood, and were much more so in my childhood: but the craving for knowledge which then commenced grew with my growth; and, as I had no books of my own in those days, my only resource was borrowing from the few acquaintances I had,—to some of whom I owe obligations of the kind that will never be forgotten. In this way, I obtained the reading of many valuable works, though generally old ones;—but it was a great day for me when the first of Sir Walter Scott's works fell into my hands. It was *The Heart of Mid Lothian*; and was lent me by a friend, whose family were rather better provided with books than most in our neighbourhood. My delight in the work was very great, even then; and I contrived, by means of borrowing, to get acquainted, in a very short time, with the greater part of the works of its illustrious author,—for works of fiction, about this time, occupied all my thoughts. I had a curious mode of impressing on my memory what had been read—namely, lying awake, in the silence of night, and repeating it all over to myself. To that habit I probably owe the extreme tenacity of memory which I now possess; but, like all other good things, it had its attendant evil,—for I have often thought it curious that, whilst I never forget any scrap of knowledge collected, however small, yet the common events of daily life slip from my memory so quickly that I can scarcely find anything again which I have once laid aside. But this misfortune has been useful in teaching me habits of order."

On this phenomenon of the young student's mind, the editor has the following observations:—"The above is an interesting remark,—pointing out a distinction, the psychology of which does not, however, seem far to seek. That sense by which the merely trivial and inexpressive occurrences of the outer world make their chief impression, had, in the case of the author, been early closed against their passage to her memory. Passing events on which the heart puts no stamp, the eye must mark, or they run the risk of being lost amid the lumber of the mind. But the knowledge for which her spirit thirsted came in, by many of its natural avenues, to a mind eager to appropriate, and mark it at once,—and memory, in the sound subject, registers all that the heart receives. To a mind thus hungering, and digesting in the dark, everything she heard that contained in itself the nourishing principle, yielded literary chyle, on which her intellectual constitution fed and expanded; and the knowledge so acquired became an indefeasible portion of her mental self. She had too many visitors in her world of shadows, to take note of all that came and went in the world of ordinary things about her. In some respects, the blind bard may perhaps be a gainer by the calamity which shuts out the scene of common things, and turns the vision inward. Milton had taken leave for ever of the faces of the earth, ere he met the angels face to face in paradise:—but *he* was familiar with the commonplaces of the outer world long ere his darkness came down—was a man of business and detail,—and the distinction

which Miss Brown perceives in the power of her own memory, as applied to differing subjects, is the more easily explained *because* it had no existence with him.'

"About the beginning of my thirteenth year, (continues Miss Brown), I happened to hear a friend read a part of Baines's *History of the French War*. It made a singular impression on my mind; and works of fiction, from that time, began to lose their value, compared with the far more wonderful Romance of History. But books of the kind were so scarce in our neighbourhood, that *Hume's History of England*, and two or three other works on the same subject, were all I could reach,—till a kind friend, who was then the teacher of our village-school, obliged me with that voluminous work, *The Universal History*. There I heard, for the first time, the histories of Greece and Rome, and those of many other ancient nations. My friend had only the ancient part of the work; but it gave me a fund of information, which has been subsequently increased from many sources;—and at present I have a tolerable knowledge of History. My historical studies made a knowledge of Geography requisite; but my first efforts to acquire it had been made even in childhood, by inquiring from every person the situation and locality of distant places which they chanced to mention. As I grew older, and could understand the language of books, the small abridgments of Geography, which were used by my brothers and sisters at the village school, were committed to memory, by a similar process to that by which I had learnt the Dictionary and Grammar. In order to acquire a more perfect knowledge of the relative situations of distant places, I sometimes requested a friend, who could trace maps, to place my finger upon some well-known spot, the situation of which I had exactly ascertained,—and then conduct the fingers of the other hand, from the points thus marked, to any place on the map whose position I wished to know,—at the same time mentioning the places through which my fingers passed. By this plan, having previously known how the cardinal points were placed, I was enabled to form a tolerably correct idea, not only of the boundaries and magnitude of various countries, but also of the courses of rivers and mountain-chains. The first geographical problem that I remember, occurred to me on hearing, in an account of the discovery of America, that Columbus at first intended to reach the coasts of Asia by sailing to the west; and, as I knew that Asia was in the eastern portion of the world, as laid down on our maps, the statement puzzled me much. At length, however, hearing our village teacher explain to my elder brothers and sisters the globular figure of the earth, that problem was solved;—but to comprehend it cost me the study of a sleepless night! As I increased in years and knowledge, the small school-books already mentioned were found insufficient; and I had recourse to my old method of borrowing. By this, I obtained some useful information; and increased it by conversation with the few well-informed persons who came within the limited sphere of my acquaintance. In the pursuit of knowledge, my path was always impeded by difficulties too minute and numerous to mention; but the want of sight was, of course, the principal one,—which, by depriving me of the power of reading, obliged me to depend on the services of others;—and as the condition of my family was such as did not admit of much leisure, my invention was early taxed to gain time for those who could read. I sometimes did the work assigned to them, or rendered them other little services:—for, like most persons similarly placed, necessity and habit have made me more active in this respect than people in ordinary circumstances would suppose. The lighter kinds of reading were thus easily managed; but my young relatives were often unwilling to waste their breath and time with the drier, but more instructive, works which I latterly preferred. To tempt them to this, I used, by way of recompence, to relate to them long stories, and even novels, which perhaps they had formerly read but forgotten:—and thus my memory may be said to have earned supplies for itself. About the end of my fifteenth year, having heard much of the Iliad, I obtained the loan of Pope's translation. That was a great event to me; but the effect it produced requires some words of explanation. From my earliest years, I had a great and strange love of poetry; and could commit verses to memory with greater rapidity than most children. But at the close of my seventh year, when a few Psalms of the Scotch version, Watts's *Divine Songs*, and some old country songs (which certainly were not divine), formed the whole of my poetical knowledge, I made my earliest attempt in versification—upon that first and most sublime lesson of childhood, *The Lord's Prayer*. As years increased, my love of poetry, and taste for it increased also, with increasing knowledge. The provincial newspapers, at times, supplied me with specimens from the works of the best living authors. Though then unconscious of the cause, I still remember the extraordinary delight which those pieces gave me,—and have been astonished to find that riper years have only confirmed the judgments of childhood. When such pieces reached me, I never rested till they were committed to memory; and afterwards repeated them for my own amusement, when alone, or during those sleepless nights to which I have been, all my life, subject. But a source of still greater amusement was found in attempts at original composition; which, for the first few years, were but feeble imitations of everything I knew—from the Psalms to Gray's *Elegy*. When the poems of Burns fell in my way, they took the place of all others in my fancy:—and this brings me up to the time when I made my first acquaintance with the *Iliad*. It was like the discovery of a new world, and effected a total change in my ideas on the subject of poetry. There was, at the time, a considerable manuscript of my own productions in existence,—which, of course, I regarded with some partiality; but Homer had awakened me,—and, in a fit of sovereign contempt, I committed the whole to the flames. Soon after I had found the Iliad, I borrowed a prose translation of Virgil,—there being no poetical one to be found in our neighbourhood; and in a similar manner made acquaintance with many of the classic authors. But after Homer's, the work that produced the greatest impression on my mind was Byron's *Childe Harold*. The one had induced me to burn my first manuscript,—and the other made me resolve against verse-making in future; for I was, then, far enough advanced to know my own deficiency—but without apparent means for the requisite improvement. In this resolution I persevered for several years, and occupied my mind solely in the pursuit of knowledge; but, owing to adverse circumstances, my progress was necessarily slow. Having, however, in the summer of the year 1840, heard a friend read the story of La Pérouse, it struck me that there was a remarkable similarity between it and one related in an old country song called the *Lost Ship*, which I had heard in my childhood. The song in question was of very low composition; but there was one line at the termination of each verse which haunted my imagination,—and I fancied might deserve a better poem. This line, and the story of La Pérouse, together with an irresistible inclination to poetry, at length induced me to break the resolution I had so long kept;—and the result was the little poem called *La Pérouse*, which will be found at page 207 of this volume. Soon after, when Messrs. Gunn & Cameron commenced the publication of their *Irish Penny Journal*, I was seized with a strange desire to contribute something to its pages. My first contribution was favourably received; and I still feel grateful for the kindness and encouragement bestowed upon me by both the editor and the publishers. The three small pieces which I contributed to that work were the first of mine that ever appeared in print,—with the exception of one of my early productions which a friend had sent to a provincial paper. The *Irish Penny Journal* was abandoned, on the completion of the first volume: but the publishers, with great kindness, sent me one of the copies,—and this was the first book of any value that I could call my own! But the gift was still more esteemed as an encouragement—and the first of the kind."

Of the circumstances under which she became a poetical contributor to this paper, Miss Brown's narration gives the following account:—

"At this juncture, I had heard much of the London *Athenæum*; and the accounts of it which the provincial papers contained made me long to see it,—but no copies reached our remote neighbourhood. Finding it impossible to borrow the publication, I resolved to make a bold effort to obtain it; and, in the spring of the year 1841, having a number of small poems on hand, I addressed them to the Editor, promised future contributions, and solicited that a copy of the journal might be sent to me as the return. My application was long unanswered; and I had given up all for lost,—when the arrival of many numbers of the journal, and a letter from the Editor, astonished me, and gratified a wish which had haunted my very dreams. From that period my name and pretensions have been more before the public—many poems of mine having appeared in the pages of that publication, in Mr. Hood's *Magazine*, and in the *Keepsake* edited by the Countess of Blessington. Ten only of those contributed to the *Athenæum*, have been included in the present collection—because most of them were so widely copied into the journals of the day, that I feared they might be too familiar for repetition."

"In the long letter, (remarks the editor) from which these extracts are taken, there are other passages furnishing interesting examples of the earnestness which let no opportunity escape which might help to reverse the seeming decree of her destiny, by which the author was shut out from the tree of knowledge. Thus, an opportunity having come in her way for acquiring, through the kindness of a friend, a knowledge of the French language, poetry and some objects in connexion with it very dear to her imagination, are put resolutely aside, for the purpose of securing this one more golden bough. * * Every step gained by her in learning, valued for itself, is valued more as the road to another. The knowledge earned is at once invested in the purchase of further knowledge. Of all the fruit which she gathers the seed is saved for a new increase."—Facts like these better recommend a volume like Miss Brown's than any comment of our own; and we feel some pleasure from the share we have had in bringing to the public notice a case so interesting and meritorious.

The first and longest poem in this volume, 'The Star of Attéghéi,' relates one of those romantic episodes, which, as in all contests of the kind, have abounded in the long struggle maintained by the mountaineers of Circassia against the persevering attempts of Russia upon their independence. The space which we have devoted to the incidents of Miss Brown's story, leaves us no room, however, to deal with this poem at such length as could give our readers any sufficient acquaintance with it—and we must, therefore, refer them to the volume itself.

'The Vision of Schwartz' relates the night-vigil of one of those dreamers of the dark ages, who, consulting the secrets of chemistry for impossible results, came unexpectedly upon other discoveries which have been a blessing or a curse to after-time. Bernold Schwartz, a monk, who lived about the beginning of the 12th century, is said to have discovered the art of making gunpowder in his search for the philosopher's stone. In the hour of this fatal projection,—

> A sound, like winter's echoing blast,
> Or ocean's booming, deep and vast,
> Upon the midnight came!
> The awful thunder with it blent,
> And far and fearful sounds were sent,—
> The crash of fallen battlement
> And roar of rushing flame—
> A din, as of some distant world,
> Amid the stars, to ruin hurled!

And when, in terror, he essays to fling away the "heap of dim discoloured dust" which is "the end of all his art," his hand is arrested by a supernatural presence,—which opens for him the gates of futurity,—and shows him, in a succession of episodes, drawn from subsequent history, the uses of the deadly agent to which his empirical science has given birth:—

> "And is it thus repaid, at last—
> My weary search for truth?
> Was it for this my spirit cast
> Away her glorious youth,
> And made her roses early sere?
> For human love and human fear,

And all the ties that bind us here,
Her higher hopes have spurned,—
And spent her spring in thankless toil,
Upon a bleak and barren soil,—
Whose fruit, when found, like Timour's spoil,
To dust and ashes turned,—
Ashes that more of ill contain
Than all Gomorrah's fiery rain?
"O! master of the hidden lore,
Whose dark revealings, now,
Shall haunt my slumbers, evermore,—
From whence, and what, art thou?"
The chemist ceased—for on his cell
A moment's twilight shadow fell,
As soft as on the dewy dell
Descends the eve of June;
And the deep curfew, far remote,
Blent with the night-bird's lonely note,
Upon the still air seemed to float,
In sweet and solemn tune!
And when the song and shadow flew,
The prophet-guest had vanished, too!

We have left ourselves less room than we could have desired for specimens of the beautiful lyrics which first recommended Miss Brown's muse to the *Athenæum*—and which we think the strongest portion of her volume. As we have said, we leave to others the task of more particularly characterizing them. We are necessarily limited in our own selection, by the exclusion of some of the finest, which were contributed to our columns:—but the following instances, amongst many others which the volume offers, show that the limitation does not leave the author shorn of her strength. Had we not abjured criticism for the present, we might say that we do not claim for Miss Brown much originality, either of thought or forms. She has caught the sweet tones of others, and her models are obvious enough. But to a fine poetical sense, a great sensibility to melody, and at times a rich and deeped-toned utterance, she may, we think, fairly lay claim. Her principal defects are such as her story will account for—and they will naturally yield to longer practice and extended knowledge:—

*Let us Return.*

"Let us return!" said the broken heart
Of the mountain hermit's tale,—
When he saw the morning mists depart
From the summits grey and pale:—
For he knew that the fan-palm cast the shade
Of its ever-glorious green
Where the love of his blasted youth was laid,
And the light of her steps had been.
Ah! thus, for ever, the heart looks back
To its young hope's funeral urn:—
To the tender green of that early track,
To its light let us return!

The lines of our life may be smooth and strong,—
And our pleasant path may lie
Where the stream of affection flows along,
In the light of a summer sky:—
But woe for the lights that early wane,
And the shades that early fall,
And the prayer that speaks of the secret pain,
Though its voice be still and small!
To the sweeter flowers, to the brighter streams,
To the household hearths that burn
Still bright in our holy land of dreams,—
To their love let us return!

'Tis well we have learned the truths of time,—
But they came with the winter's snow,—
For we saw them not through the flowery prime
Of our summers long ago:
Yet the spring is green and the summer bright
As they were in the years of yore,
But on our souls the love and light
Of their gladness come no more!
Back—back to the wisdom of the years
That had yet no loss to mourn,—
To their faith, that found no place for tears,
To their joy, let us return!

We have paused, perchance, by the quiet grave
Of our young who early slept,—
And, since they left us, many a wave
O'er our weary bark hath swept;—
But, far in the morning light enshrined,
They gladden our backward gaze,
Or wake, like the breath of the summer's wind,
The soul of our better days.
Back—back! to the living wave, we drew,
With *them*, from a purer urn,—
To the path of the promise lost to view,
And its peace—let us return!

*The First Friend.*

The priceless gifts of the soul were his:
And fame, whose early light
In darkness rose, as the stars arise
From the silent depths of night:
And his upward course was brightly calm,—
For his glory grew like the fadeless palm;
It felt no blight and it feared no blast,
But stood in its greenness to the last.

Yet ever around his spirit hung
A shadow like a spell,—
And his eye grew weary of looking long
For a face remembered well:
Though many a bright one met his gaze,
In minster's gloom or in banquet's blaze,
Yet none could waken again the glow
That gladdened the pilgrim long ago.

For, once, in the cold world's careless crowd,
When hope was faint and dim,
Like a sunbeam bright through the wintry cloud,
A young face smiled on him!
That moment seemed as if night were past,
And the day of his life had dawned at last;
And the strength of his soul returned again,
As rivers rise in the mountain rain.

Oh! never again could time or toil
The wanderer tire or chill,
For he kept the light of that blessed smile—
The star of his desert—still:
And now, he had reached the pleasant streams,—
But they took their hue from *its* quenchless beams;
For many shone on his after-lot,
But *that* was the only unforgot!

The winters passed, and the summers came,
And his fortune's frowns were o'er,
For he wore the fadeless wreath of fame;—
But he saw that face no more!
The sunny shore and the stormy sea,
The cities thronged and the woodlands free,
All—all he sought,—but he sought in vain,
For it never smiled on him again!

Oh! did the grave, in its quiet, close
O'er the flower he loved so long,—
Whose nameless memory ever rose
On the breath of his sweetest song?
Ah! many a lyre the laurel wreathes,
That but of the withered myrtle breathes,—
And the sweetest incense ever shed
Hath been an offering to the dead!

Silent and swift the years sped on,
And they bore his youth away;
But the vision lingered still, that shone
So bright on his early day:
For roses fade, when the summer flies,—
But the rose of the canvas never dies!
And thus, when his summer days were gone,
The rose of his memory still bloomed on.

Oh! well that he had not seen it fade,
Or change as the living changed,—
But blooming ever, through sun and shade,
In its beauty unestranged!
There fell no blight on its tearless youth,—
There came no stain on his spirit's truth;—
For he sought that friend on the earth no more,
But turned his gaze to a brighter shore!

It is a defect in these poems that they do not exhibit greater varieties of rhythm,—and that too many of them are cast in the same favourite mould of verse:—but we cordially agree with the editor's summing up—that "the energy displayed, from her childhood, by this almost friendless girl, raises at once the interest and the character of her muse. There is something touching—and teaching, too,—in the picture of that perseverance which has conquered for itself an inner world of thought, in lieu of that outer world so early withdrawn from the sense. The bard gathers dignity from the darkness amid which she sings—as the darkness itself is lightened by the song. There are lessons to be drawn from both;—and the editor believes that this little volume has a variety of titles which should promise it a sure and extended popularity."

---

*The Life of the Rev. Andrew Bell, D.D.* The First Volume by Robert Southey, Esq., LL.D., edited by Mrs. Southey; the Two Last by his Son, the Rev. C. C. Southey, B.A. 3 vols. Murray.

A posthumous work of the late Mr. Southey cannot fail to excite interest. A Life from his pen of Dr. Bell, for whom and whose system he was known to entertain so marked a respect, addresses the reflecting with a still higher claim to attention, and illustrates the veneration which greatness has for greatness. The present biography comes also before us with special authority; for the materials were, in great part, intrusted by the subject of it to the writer, and clauses to that effect were, we are told, inserted in most of the wills that Dr. Bell executed; in one of which he gave directions for a complete edition of his works to be prepared jointly by Mr. Wordsworth and Mr. Southey; but, in consequence of this having been afterwards commenced by Bishop Russell, the clause was omitted in his final will, in which, instead, Dr. Bell submitted to Mr. Southey "his books, papers, letters, and college essays, for his use and perusal;" adding, in a codicil,—"but not so as to interfere with Mr. Southey's designs, who will, of course, have access to all my papers." The trustees of the will, however, saw reason to request that Mr. Southey would write the Life of Dr. Bell, and appointed a committee to select such documents from the mass of his papers as would be available for such purpose. In this labour much credit is due to Mr. Davies (Dr. Bell's amanuensis), who, to promote the object in view, took lodgings at Keswick, and drew up a series of narratives for Mr. Southey's use; a course rendered quite needful, it seems, by the vast and formidable mass of materials accumulated:—

"And (continues the preface) it must be borne in mind that these were not all important letters, containing specific and available information, but that perhaps several hundreds had to be searched, even for a single fact or date; and the Doctor's pursuits and employments being often so complicated as to require a number of distinct notices, the same papers have often passed forty or fifty times through Mr. Davies's hands. As soon as the papers had arrived at Keswick, and been arranged by Mr. Davies, my father commenced his labours; but being only able to devote a small portion of each day to this purpose, he proceeded but slowly. The materials being too cumbrous to be conveniently removed to Greta Hall, he regularly went down to Mr. Davies's lodgings, remaining from seven until nine o'clock in the summer mornings, and from daylight until that time in winter. His first step was to read through the great body of the letters, and mark such as he wished Mr. Davies to copy. This alone occupied him twelve months; and so many papers were afterwards sent him, that twelve months more were similarly employed. Meantime Mr. Davies, with unwearied patience and industry, was collecting all the matter that could possibly be available into a series of connected narratives, from which my father now commenced composing the Life; but many circumstances combined to retard his progress. In the summer of 1838, when he made a short tour on the Continent, he had brought the Life down to the point where it has fallen to my office to resume it; and on returning home for some of the winter months, he partly occupied himself in hearing Mr. Davies read over the notes and memoranda he had made during a visit to Swannage. From the spring of 1839 until the following August he was again absent; and from the period of his return until his death, I deeply regret to say, he was totally incapable of resuming his literary labours."

To this simple narrative there is attached a melancholy interest, as relating the last occupation of a powerful mind just previous to the destined time of its extinction. Only the first volume, however, was the Laureate's production—the second and third are by his son. The opening paragraphs bear the mint-stamp of the poet's exquisite prose-style; and, besides, present a portrait drawn by a master:—

"Andrew, the son of Alexander and Margaret Bell, was born in the city of St. Andrew's, on the 27th of March 1753. His father was a barber in that city—a personage of more importance in the age of periwigs, and when considered as a surgeon of the lowest class, than in these times. He had been educated for a better station, but was thus reduced by a complication of misfortunes brought upon him, his son says, in early life by his inexperience and credulity. That his immediate ancestors were persons of some consequence appears from this circumstance, that they are remembered to have been the first persons in the city of St. Andrew's who introduced the luxury of tea, and could boast of a china tea-service. He was a man of extraordinary abilities; and having acquired no inconsiderable

degree of mechanical and practical science, added to his original trade that of clock and watchmaker; regulated by observations the timepiece in the public library of the university, and assisted Dr. Walker the Professor of Natural Philosophy, in preparing his experiments. His habits and appearance were singular, yet not so as to lessen the respect in which he was held for his talents, probity, and strength of character. He is described as tall and ungainly, with thick lips and a great mouth, which he commonly kept open, and wearing a large, bushy, well-powdered wig. Persons are still living who remember him hastening through the street, with a professor's wig, ready dressed, in each hand, his arms at half-stretch to prevent their collision. After trimming one professor he would sit down and breakfast with him, and then away to trim and breakfast with another; his appetite, like his mouth, (and his mind also,) being of remarkable and well-known capacity. He was at one time bailie of the city; and once by his personal influence, after all other means had failed, he quelled what is called a 'meal-mob'—riots upon that score being then so frequent as to obtain this specific denomination. The house in which he lived, and which was his own, stood in South Street, on the east side of the town or parish church, and adjoining it. It consisted of two stories, with an outer staircase supported by wooden pillars, and a wooden projection into the street. This served for his shop, and there he enjoyed his afternoon lounge. This style of building was formerly common in old Scotch towns; particularly in Edinburgh, Kirkcaldy, and St. Andrew's. It has now become rare in Scotland; and the specimens of it which were common in the North of England a generation ago, have almost all been replaced in a manner which, if it be as much more commodious as it is less picturesque, must be considered a great improvement. Bailie Bell was a proficient at draughts, backgammon, and chess. Such of the students, and of the professors also, as were fond of these games, used to meet at his house, and Andrew, while a mere child, acquired such singular skill in all of them, that the best players were fond of engaging with him. A more remarkable instance of the Bailie's versatile talents is, that he engaged with Mr. Wilson, afterwards professor of astronomy at Glasgow, in a scheme for casting types upon some plan of their own. They were employed upon this, his son said, day and night, night and day, in a garret; and though they did not ucceed, yet, after the professor's removal to Glasgow, he well-known printers Robert and Andrew Foulis sare said to have been beholden to him for the beauty t of their typography. Bailie Bell, having saved a little property, retired from business a short time before the close of his life."

Dr. Bell was the second son of the Bailie. His first school experiences are curious, not only as giving indications of his future course in life, but as recording a system which the world has happily now outgrown :—

"He never spoke of the discipline, or rather tyranny, which he witnessed and endured in those years of his life, without indignation. 'Oh, it was terrible!' he said, 'the remains of feudal severity! I never went to school without trembling. I could not tell whether I should be flogged or not.' His father, he used to say, had been driven from the grammar-school by cruelties that would now hardly be believed; yet neither his father nor he were wanting in capacity or diligence. Schools were everywhere conducted in those days upon a system of brutal severity, which never ought to have existed except where the master happened to be a man of singular humanity. In proof, however, that the severity of Scotch parents was then little less in degree, Dr. Bell instanced the case of a little boy, who, on his return from school after a merciless flogging, was observed to sit very uneasily: the father examined him, and though he saw that a great wound had been made, he merely observed there was room enough for more! 'But mind,' Dr. Bell added, 'he did not forget to remonstrate with the master.' Between the fear of punishment and the earnest desire of improvement, his thoughts were so wholly engrossed by his lessons, that the family often said it was a wonder Andrew did not go east instead of west when he went out of the door; and, indeed, though he did not lose the way, yet when he was going to any particular place he generally overpassed it, being lost in thought as he went along. What he knew he knew well, and never forgot; but a want of verbal memory rendered that which, for common capacities, is, however unattractive, the easiest of their tasks at school, to him the most difficult. According to his own account, he never could correctly get by heart a single rule in the Latin syntax, though he perfectly understood the meaning, and was at no loss to apply it. My old master, Dr. Vincent, used to say, 'Give me a reason, boy! I would always rather you should give me a reason than a rule.' But under a more Busbeian system than that of Westminster had become in my days, and a less reasonable master, this natural defect or peculiarity sufficiently accounts for the fear with which Andrew took his way to school. Notwithstanding this, he made good progress in Latin; Greek, in his country, was seldom or never taught at that time in such schools. 'I do not suppose,' he said, 'the master could have taught it; so we began our Greek alphabet when we went to the university.' The inclination which led him to scientific studies was manifested at this time in the earnestness with which he applied himself to arithmetic. Dissatisfied with the book of arithmetic which was used in the school, he set about composing one for his own improvement, taking, it is said, Mair's for the foundation. Not only his leisure hours were devoted to this object, but much nightly labour also—so early did he acquire that uncomfortable and injurious habit; and, young as he then was, he completed the task so much to his own satisfaction, that when, about ten years afterwards, most of his papers were lost in a shipwreck, he particularly regretted the loss of this."

We are always disposed to take reminiscences of this kind with many grains of allowance. So early as 1769, Andrew Bell matriculated at the United College. He was the youngest pupil in the mathematical class, and obtained the prize in that class when still young enough to be called Little Andrew; and subsequently, "several public and honourable marks of distinguished merit and proficiency." During these years he held the Glendie bursary as next-of-kin; his mother (Margaret Robertson) being descended from the Dean of Cashel of that name, who founded, by his will, a bursary at St. Salvator's, for the benefit of his descendants. The resources derived from this privilege were, however, scanty, and young Bell was compelled to eke them out by teaching. He diligently applied himself to mathematics and natural philosophy,—having for his instructor in the latter Dr. Wilkie, the author of the 'Epigoniad,' in whose favour Mr. Southey makes an eloquent and characteristic digression.

On attaining twenty-one, Andrew Bell resolved on seeking his fortune in the colonies, and having received some offers from Virginia, embarked for America, first providing himself with honourable testimonials. It was in the year 1774 that he sailed from Glasgow. For the next five years nothing is known. In 1779 he was engaged as private tutor at an annual salary of 200*l.*, in the family of Mr. Carter Braxton, a wealthy merchant of West Point. Two years later he accompanied the sons of this gentleman to Europe, and devoted himself to their education; and so prudent had he been, that he was now in possession of or held securities worth not less than 8 or 900*l.*, though unfortunately few of these securities were realized. He had much trouble with the young men, but fought through all difficulties until, compelled by a combination of circumstances, he, in 1784, consented to their return. Meantime, he had himself succeeded in getting ordination in the church of England; and soon after obtained an appointment as preacher to the Episcopal chapel at Leith, with a salary of 70*l.* a year; but this he left in six months, to undertake the education of Lord Conyngham's second son, an engagement however in which he was disappointed; and therefore returned to his flock. Ultimately his destination was India. Having taken farewell by letter of his Leith friends, and obtained a doctor's degree, he sailed for Madras, and arrived there on the 2nd of June, 1787; and on the 10th of August was appointed chaplain to the 4th regiment, stationed at Arcot. He attempted to add to his means by the delivery of philosophical lectures, in which he was only moderately successful; and on the day on which he concluded his second course, sailed with his apparatus for Bengal and Calcutta, where he remained for two months, and then returned to Madras, to receive a shower of appointments :—

"It must be confessed, that, at this time, Dr. Bell partook largely of the blessings of pluralism. He held, 1st, the as yet unconfirmed chaplainship of the 4th European regiment; 2d, the deputy-chaplainship of the 19th regiment of cavalry in the King's service; 3d, that of his Majesty's 36th; 4th, of the 52nd; 5th, of the 74th; 6th, the junior chaplainship at Fort St. George; 7th, the superintendency of the undertaker's office: and 8th, the chaplainship of the army; Kehama, who was in eight places at once, was a type of Dr. Bell at this time. Some of these offices may have been sinecures; but there is good proof among his papers that none of them were sinesalaries."

The following letter on his father's death, which happened about this time, may be quoted to his credit—in evidence both of his feeling and judgment :—

"*Dr. Bell to the Rev. Dr. J. Adamson.*

Madras, 1789.

"My dear Sir,—I received, July 27th, by the packet of the Chesterfield, the afflicting news of the death of as good a father, and as just and upright a man, as ever lived. You need not blush to call him friend, as I never shall to call him father. I might have been better prepared, as you think I ought to have been, for this distressful report, had I construed superstitiously the alarming letter from him, with which my heart has been wrung of late. It has pleased God to follow me through life with his merciful chastisements, and to train me up in the school of adversity. I was flattering myself that my late letters would remove any distress that my poor father suffered on the score of fortune, and that I had attained the great object of my adventuring the East, being able to make some provision for the family, when news is brought to me that my ill-father, who had a heart that felt too much, and a disposition that led him to all goodness, and a genius and education that elevated him far above his condition in life, had fallen a sacrifice to a complication of misfortunes, entailed upon him in early life, in the inexperience of an academic education and the credulity of youth —misfortunes which you will pity, which every good man will pity, and thank God that it fell not to his own share to suffer as he did. It is the never-failing effect of a depressed mind in this country to induce bilious complaints. I had not, even in point of health, recovered from the effect of my father's description of what he suffered on this occasion, when I was nominated junior chaplain at this presidency, and thought to soften anew the complaints of European fortune, and hold out to my father the best consolation I could offer under his severe trials—the report of my private good success in life, and the assurance of my resolution, as soon as my fortune was settled, to make ample provision for him through life. But these hopes were scarcely formed when they are blasted for ever by the melancholy account of his sudden death. After trying in vain to stand this shock, I have left my duty to my friend and colleague, Archdeacon Leslie, and retired to the country, where I am secluded from every European countenance. Here I am at leisure to indulge grief, and thereby to prevent its violent effusion; to survey my past life; to correct those errors that may have brought upon me such sufferings; and to lay down rules for my future conduct, from which, if I ever swerve, it must be from depravity of inclination, and not strength of temptation. My poor sisters now claim all my attention—my affections now centre there. The only consolation I can now receive is a favourable report of them. I am much sensible of what they and I owe to you for your early attention. Your kindness to them cannot add to the opinion the world enter-

tains of your goodness; but it will add greatly to the obligation I feel to that goodness, and it will, somehow or other, provide a benefactor to your own children. I beseech you then, for the sake of your own family, who must one day be deprived of so good a man and so excellent a father, to regard the situation of my sisters. I wish to devolve this duty, during my absence from home, upon you and Dr. George Hill. I ask it not on account of our past acquaintance—I ask it not on account of our future acquaintance—I ask it on account of the distress of my unfortunate sisters. I trust that my father has done, what I often told him to do in St. Andrews, and repeated to him at Leith, left the whole of his estate to my sisters, and that there will be no trouble in securing this for them. From what my father wrote to me about a will of my brother's in my favour, and a forged will in favour of others, I am apprehensive there will be much trouble in recovering what he always meant should fall to the family. The money in Mr. Reid's hands, I trust, will not be lost to my sisters, to whom, as to my father, I will give the lifeRent of whatever may be recovered and remain, after expenses are paid. I before sent a power of attorney to my father for this purpose; I now send one to you. I presume not to offer any instructions, nor need you refer to me at this distance. Act for them as for yourselves, and your conduct will meet with my support and approbation, and I will be answerable for the consequences. It is unnecessary to remark, that I must insist, as a preliminary article, that every direct and contingent expense which may attend your acting for me, and correspondence with me, be charged to my account. Letters should always be sent by the post. It is the only conveyance to be trusted to. There is no expense but in the postage to and from London, which is a mere trifle. I hope the school thrives. It is not my wish to raise my sisters above their present situation in life. This would not conduce to their happiness. What I wish only is to render them easy in their circumstances, and comfortable in their sphere of life; and I shall be glad of your opinion of what is necessary for this purpose. I wrote to Professor George Hill, that there may be some provision for that mortality which reigns so much in my mind at present. I say nothing of Dean of Guild Kerr. I know he will not be wanting in his good offices and services, and I trust I shall be able to repay them. . . ."

Adventurers to the East Indies, as one of Bell's correspondents remarked to him, brought with them but little science, and therefore there is less to wonder at in Dr. Bell's rapid success there as a philosophical teacher. To his office of junior chaplain of Fort St. George, was attached the office of—undertaker!—*i. e.* the chaplain was the person by whom funerals were actually furnished, the working undertaker being only his functionary, and receiving a graduated per centage on the cost. We have a copy of Bell's instructions to this personage, which are characteristic, but too long for quotation; soon after issuing them, however, he gave up the business. He was not only ashamed of it, but preferred lecturing, and in the spring of 1793 delivered a scientific course in his own house at Madras, realizing thereby 600 pagodas.

We now approach the grand mission of his life:—

"When the Madras government desired Captain Dempster to leave Dr. Bell there, instead of carrying him on to Bengal, according to his original destination, it was in conformity to an application from the committee then employed in establishing a Military Male Orphan Asylum in that presidency. The committee made this application, because they looked on him as a person eminently qualified to superintend the education of children. The opinion so justly formed at this time of his peculiar talents, placed him in the way of preferment, and enabled him to lay the foundation of his fortune; and the office to which he was in consequence appointed, called forth those talents in the manner which has signalized his name."

We have not space to relate the rise and progress of the institution: suffice it to say, that Dr. Bell offered his services without salary. The successive appeals to the public were successful, and application was from time to time forwarded to the Court of Directors to increase their funds; though the company at first refused, they had help from other quarters, and the affair went on prosperously, so that they were soon able to provide for 200 boys. Rules were of course appointed; an acting president and select committee were nominated; an annual examination was had; the practice of inoculation introduced, the patients being removed to the hospital; and while Dr. Bell's solicitude increased, the establishment grew into reputation and influence.

It remains to trace the growth of the system of education, which originated at the Madras Asylum, and has since spread its branches over divers lands. The following fact is curious:—

"Fathers were not more desirous to obtain for their children the benefits of this Asylum, than the mothers of those who were fatherless were at first averse to it. Most of these women, being Moors or Hindoos, were so ignorant of European customs, and so prepossessed with a notion that the religion of the English was as inhuman as their own, that when, by order of those to whose guardianship the boys had been left, they brought them to be admitted upon the foundation, they supposed the children were to be sacrificed to some unknown god, and went through all the ceremonies of mourning for them. Others fancied that they were giving them up to slavery; and even the least unreasonable thought they were delivered over to hard taskmasters. A short time sufficed for dispelling such suppositions; and when they understood what the object of the institution really was, they then employed every kind of importunity to obtain admittance for them."

Now then for the origin of the system itself:

"Dr. Bell was dissatisfied with the want of discipline, and the imperfect instruction in every part of the school; but more particularly with the slow progress of the younger boys, and the unreasonable length of time consumed in teaching them their letters. They were never able to proceed without the constant aid of an usher, and, with that aid, months were wasted before the difficulties of the alphabet were got over. Dr. Bell's temper led him to do all things quickly, and his habits of mind to do them thoroughly, and leave nothing incomplete. He tells us, that from the beginning he looked upon perfect instruction as the main duty of the office with which he had charged himself; yet he was foiled for some time in all the means that he devised for attaining it. Many attempts he made to correct the evil in its earliest stage, and in all he met with more or less opposition from the master and ushers. Every alteration which he proposed, they considered as implying some reflection on their own capacity or diligence; in proportion as he interfered, they thought themselves disparaged, and were not less displeased than surprised, that instead of holding the office of superintendent as a sinecure, his intention was to devote himself earnestly to the concerns of the Asylum, and more especially to the school department. Things were in this state, when, happening on one of his morning rides to pass by a Malabar school, he observed the children seated on the ground, and writing with their fingers in sand, which had for that purpose been strewn before them. He hastened home, repeating to himself as he went 'Ευρηκα,' 'I have discovered it;' and gave immediate orders to the usher of the lowest classes to teach the alphabet in the same manner, with this difference only from the Malabar mode, that the sand was strewn upon a board. These orders were either disregarded or so carelessly executed, as if they were thought not worth regarding; and after frequent admonitions, and repeated trials made without either expectation or wish of succeeding, the usher at last declared it was impossible to teach the boys in that way. If he had acted on this occasion in good will, and with merely common ability, Dr. Bell might never have cried Ευρηκα a second time. But he was not a man to be turned from his purpose by the obstinacy of others, nor to be baffled in it by their incapacity; baffled, however, he was now sensible that he must be, if he depended for the execution of his plans on the will and ability of those over whose minds he had no command. He bethought himself of employing a boy, on whose obedience, disposition, and cleverness he could rely, and giving him charge of the alphabet class. The lad's name was John Frisken; he was the son of a private soldier, had learned his letters in the Asylum, and was then about eight years old. Dr. Bell laid the strongest injunctions upon him to follow his instructions; saying, he should look to him for the success of the simple and easy method which was to be pursued, and hold him responsible for it. What the usher had pronounced to be impossible, this lad succeeded in effecting without any difficulty. The alphabet was now as much better taught as till then it had been worse than any other part of the boys' studies; and Frisken, in consequence, was appointed permanent teacher of that class. Though Dr. Bell did not immediately perceive the whole importance of this successful experiment, he proceeded in the course into which he had been, as it were, compelled. What Frisken had accomplished with the alphabet class, might, in like manner, be done with those next in order, by boys selected, as he had been, for their aptitude to learn and to teach. Accordingly, he appointed boys as assistant teachers to some of the lower classes, giving, however, to Frisken the charge of superintending both the assistants and their classes, because of his experience and the readiness with which he apprehended and executed whatever was required from him. This talent, indeed, the lad possessed in such perfection, that Dr. Bell did not hesitate to throw upon him the entire responsibility of this part of the school. The same improvement was now manifested in these classes as had taken place in teaching the alphabet. This he attributed to the diligence and fidelity with which his little friends, as he used to call them, performed his orders. To them a smile of approbation was no mean reward, and a look of displeasure a sufficient punishment. Even in this stage he felt confident that nothing more was wanting to bring the school into such a state as he had always proposed to himself, than to carry through the whole of the plan upon which he was now proceeding. And this, accordingly, was done. The experiment which from necessity had been tried at first with one class, was systematically extended to all the others in progression; and, what is most important with scholastic improvement, moral improvement, not less, in consequence of the system, is said to have kept pace. For the assistant teachers, being invested with authority not because of their standing in the school, retained their influence at all times, and it was their business to interpose whenever their interference was necessary: such interference prevented all that tyranny and ill usage from which so much of the evil connected with boarding-schools arises; and all that mischief in which some boys are engaged by a mischievous disposition, more by mere wantonness, and a still greater number by the example of their companions. The boys were thus rendered inoffensive towards others, and among themselves; and this gentle preventive discipline made them, in its sure consequences, contented and happy. A boy was appointed over each class to marshal them when they went to church or walked out, and to see that they duly performed the operations of combing and washing themselves. Ten boys were appointed daily to clean the school-rooms, and wait upon the others at their meals. Twice a-week during the hot season, and once a-week during the monsoon season, they were marched by an usher to the tank, and there they bathed by classes. As to any purposes of instruction, the master and ushers were now virtually superseded. They attended the school so as to maintain the observance of the rules; though even this was scarcely necessary under Dr. Bell's vigilant superintendence, who now made the school the great pleasure as well as the great business of his life. Their duty was, not to teach, but to look after the various departments of the institution, to see that the daily tasks were performed, to take care of the boys in and out of school, and to mark any irregularity or neglect either in them or the teachers. The master's principal business regarded now the economy of the institution: he had charge both of the daily disbursements and monthly expenditure under the treasurer. The precise date of that experiment which led to the general introduction of boy-teachers cannot be ascertained; but that these teachers had been introduced in 1791, or early in the ensuing year, is certain. In private

letters, written to his friends in Europe, Dr. Bell relates the progress of his improvements step by step, and the impressions made upon his own mind by the complete success of his exertions in a favourite pursuit. These letters show also how soon he became aware of the importance of the system which he was developing and bringing to maturity."

Dr. Bell had, of course, to contend against the opposition of masters and ushers, with whose interests the new system seemed to be inconsistent. But such opposition was but a rope of sand contrasted with the decision of his character with whom they had to deal. The measures he took to counteract it were as various as the kinds of annoyance resorted to, and at length succeeded in establishing reform. It was not done, however, without involving the resignation of the schoolmaster, who declared himself incapable of undergoing the fatigues involved in his duties. On Dr. Bell inquiring what duties he meant, he replied "Almost every duty." He was asked also, "What fatigues?" and he replied, "The fatigues of the mind." Such is the state of too many professors of education; they desiderate only mechanical employment, and a routine of tasks, involving no thought, and inducing none in their unfortunate pupils. That this mental indolence has in great part been now corrected is due to Dr. Bell's perseverance and sagacity. The boy Frisken proved a capital coadjutor to the Doctor; though only eleven years of age, he taught all the younger classes, amounting to a third of the whole school. The education at the asylum, under Dr. Bell's superintendence, was so complete as far as it went, and the character of the boys in consequence so good, that applications were made for them from all quarters. Of one of these boys, named Smith, an interesting account is given, for which however our readers must consult the work itself; where they will find recorded the scientific accomplishments of the celebrated Tippoo Sultan.

Attached as Dr. Bell was to India, still he was haunted occasionally by a desire to return home. The state of his health required change of air. For this purpose he went to Pondicherry, to Tanjore, and to Trichinopoly, but still his health declined. Nevertheless, long after he had obtained leave to return, he still lingered on the scene of his labours. At length, however, leaving the superintendence of the Orphan Asylum to the care of Mr. Kerr, he prepared to return to England. And with this terminates the Laureate's portion of the work before us.

---

*The Attaché; or, Sam Slick in England.* By the author of 'The Clockmaker.' Second and Last Series. 2 vols. Bentley.

THE Clockmaker's last revelations were so truly diverting, that the present ones will be anxiously looked for. They will be read, we may at once add, without disappointment. Nevertheless, one or two differences have passed over Sam. Good society has not "taken the shine" out of his impudent shrewdness, nor blunted the edge of his acute common-sense; but it seems to have called out a certain sentimentality (*soft sawder* of a new quality), which we like less than his sarcastic humour. Perhaps—and the phenomenon may be noted as distinctive—no professedly comic writer has ever wholly escaped like temptations; seeing that the mirthful and the pathetic own one and the same source in a superior fineness of sensibility. How far the success has been as universal as the attempt, is entirely another question, the discussion of which would be out of place, when the public is wanting to hear the Clockmaker turned Diplomatist, holding forth on our behaviour, institutions, and such delicate subjects.

As early as his eighth page, the incomparable Sam treats us to a reading of the civility of our high civilization, well worth pondering, and in any case very droll. The scene is the Liners' Hotel at Liverpool, in the corner of which "sat or stood the barmaid, for the purpose of receiving and communicating orders:"—

"Look at that gall," said Mr. Slick, "ain't she a smasher? What a tall, well-made, handsome piece of furniture she is, ain't she? Look at her hair, ain't it neat? and her clothes fit so well, and are so nice, and her cap so white, and her complexion so clear, and she looks so good-natured, and smiles so sweet, it does one good to look at her. She is a whole team and a horse to spare, that gall,—that's a fact. I go and call for two or three glasses of brandy-cocktail more than I want every day, just for the sake of talking to her. She always says, 'What will you be pleased to have, sir?' 'Somethin',' says I. 'that I can't have,' lookin' at her pretty mouth about the wickedest; well, she laughs, for she knows what I mean; and says, 'P'raps you will have a glass of bitters, sir?' and she goes and gets it. Well, this goes on three or four times a day, every time the identical same tune, only with variations. About an hour afore you come in I was there agin. 'What will you be pleased to have, sir?' says she agin, laughin'. Somethin' I can't get,' says I, a laughin' too, and a smackin' of my lips and a lettin' off sparks from my eyes like a blacksmith's chimney. 'You can't tell that till you try,' says she; 'but you can have your bitters at any rate,' and she drawed a glass and gave it to me. It tan'te so bad that, is it? Well, now she has seed you before, and knows you very well; go to her and see how nicely she will courtshy, how pretty she will smile, and how ladylike she will say, 'How do you do, sir? I hope you are quite well, sir; have you just arrived?—Here chambermaid, show this gentlemen to No. 200.—Sorry, sir, we are so full, but to-morrow we will move you into a better room.—Thomas, take up this gentleman's luggage;' and then she'd courtshy agin, and smile handsome. Don't that look well now? do you want anything better nor that, eh? if you do you are hard to please, that's all. But stop a bit, don't be in such an everlastin' almighty hurry: think afore you speak; go there agin—set her a smilin' once more, and look close. It's only skin deep—just on the surface, like a cat's paw on the water, it's nothin' but a rimple like, and no more; then look closer still and you will desearn the color of it. I see you laugh at the color of a smile, but still watch and you'll see it. Look now, don't you see the color of the shilling there, it's white, and cold, and silvery,—*it's a bought smile*, and a bought smile, like an artificial flower, has no sweetness in it. There is no natur—it's a cheat—it's a pretty cheat—it don't ryle you none, but still its a cheat. It's like whipt cream; open your mouth wide, take it all in, and shut your lips down on it tight, and it's nothin'—it's only a mouthful of moonshine; yes, it's a pretty cheat, that's a fact. This ain't confined to the women nother. Petticoats have smiles and courtshys, and the trowsers bows and scrapes and my-lords for you, there ain't no great difference that way; so send for the landlord. 'Lardner,' says you, 'Sir,' says he, and he makes you a cold, low, deep, formal bow, as much as to say, 'Speak, Lord, for thy sarvent is a dog.' 'I want to go to church to-morrow,' says you; 'what church do you recommend?' Well, he eyes you all over, careful, afore he answers, so as not to back up a wrong tree. He sees you are from t'other side of the water; he guesses, therefore, you can't be a churchman, and must be a radical: and them that calculate that way miss a figure as often as not, I can tell you. So he takes his cue to please you. 'St. Luke's, sir, is a fine church, and plenty of room; for there ain't no congregation; M'Neil's church has no congregation, nother, in a manner you can only call it a well-dressed mob,—but it has no room; for folks go there to hear politics.' 'Why what is he?' says you. 'Oh, a churchman,' says he, with a long face as if he was the devil. 'No,' says you, 'I don't mean that; but what is his politics?' 'Oh, sir, I am sorry to say, violent—' 'Yes; but what are they?' Oh,' says he, lookin' awful shocked, 'tory, sir.' 'Oh, then,' says you, 'he's just the boy that will suit me, for I am tory too, to the back-bone.' Lardner seems whamble-cropt, scratches his head, looks as if he was delivered of a mistake, bows, and walks off, a sayin' to himself—'Well, if that don't pass, I swear; who'd a thought that cursed long-backed, long-necked, punkin-headed colonist was a churchman and a tory?'"

Chapter the second, on boarding-schools, shows Mr. Slick on the side of Mr. Hood, whose 'Schoolmistress Abroad,' it may be recollected, was also devoted to the developement of the modern systems of female education. By the way, it is no small proof of the universal interest which the great question is exciting, that even the Clockmaker cannot pass the province of tight waists, routine lessons, and meagre learning, without throwing a "smasher" over its perfectly-properly kept boundaries. That his own education has not been such as to extinguish the better qualities of heart as well as of head, he shortly afterwards gives us a signal proof. It appears that his triumphant boastings of his success in Old England, written to sister Sal, with other mysterious encouragements, have led to a determination on the part of the head of the Slicks to follow his son across the Atlantic. The news is more surprising than agreeable:—

"But, heavens and airth," says he, "what shall I do with father? I warn't broughten up to it myself, and if I hadn't a been as soople as moose wood, I couldn't have gotten the ins and outs of high life as I have. As it was, I most gi'n it up as a bad job; but now I guess I am as well dressed a man as any you see, use a silver fork as if it was nothin' but wood, wine with folks as easy as the best on 'em, and am as free and easy as if I was to home. It's ginirally allowed I go the whole figure, and do the thing genteel. But father, airth and seas! he never see nothin' but Slickville, for Bunkerhill only lasted one night and a piece of next day, and continental troops warn't like Broadway or west-eend folks, I tell you. Then he's considerable hard of heerin', and you have to yell a thing out as loud as a training-gun afore he can understand it. He swears, too, enough for a whole court-house when he's mad. He larnt that in the old war, it was the fashion then, and he's one o' them that won't alter nothin'. But that aint the worst nother, he has some of them country-fied ways that ryle the Britishers so much. He chaws tobaccy like a turkey, smokes all day long, and puts his legs on the table, and spits like an enjine. Even to Slickville these revolutionary heroes was always reckoned behind the age; but in the great world, like New York, or London, or Paris, where folks go a-head in manners as well as everything else, why it won't go down no longer. I'me a peaceable man when I'me good-natured, but I'me ugly enough when I'me ryled, I tell you. Now folks will stuboy father, and set him on to make him let out jist for a laugh, and if they do, I'me into them as sure as rates. I'll clear the room, I'll be switched-if I don't. No man shall insult father, and me stand in' by, without catching it, I know. For old, deaf, and rough as he is, he is father, and that is a large word when its spelt right.—Yes, let me see the man that will run a rigg on him, and by the Tarnal"—

The reader who recollects how rough a diamond our friend was on our first meeting with him, may be curious to hear how it was he got polished in so short a space of time. And Sam—conversing always, be it recollected, in the fashion of the *aside*, the soliloquy of the stage—has no objection in the world to satisfy so natural a curiosity:—

"'There is a change in the fashion here, Squire,' said he; 'black stocks aint the go no longer for full dress and white ones aint quite up to the notch nother; to my mind they are a leetle sarvanty. A man of fashion must mind his "eye" always. I guess I'll send and get some white muslins, but then the difficulty is to tie them neat. Perhaps nothin' in natur' is so difficult as to tie a white cravat so as not to rumfoozle it or sile it. It requires quite a slight of hand, that's a fact. I used to get our beautiful little chamber-help to do it when I first come, for women's fingers aint all thumbs like men's; but the angeliferous dear was too short to reach up easy, so I had

to stand her on the foot-stool, and that was so tottlish I had to put one hand on one side of her waist, and one on t'other, to steedy her like, and that used to set her little heart a beatin' like a drum, and kinder agitated her, and it made me feel sort of all overish too, so we had to ginn it up, for it took too long; we never could tie the knot under half an hour. But then, practice makes perfect, and that's a fact. If a feller 'minds his eye' he will soon catch the knack, for the eye must never be let go asleep, except in bed. Lord, its in little things a man of fashion is seen in! Now how many ways there be of eatin' an orange. First, there's my way when I'm alone; take a bite out, suck the juice, tear off a piece of the hide and eat it for digestion, and role up the rest into a ball and give it a shy into the street; or, if other folks is by, jist take a knife and cut it into pieces; or, if gals is present, strip him down to his waist, leavin' his outer garment hanging graceful over his hips, and his upper man standin' in his beautiful shirt; or else quartern him, with hands off, neat, scientific, and workmanlike; or, if its forbidden fruit's to be carved, why tearin' him with silver forks into good sizeable pieces for helpin'. All this is larnt by *mindin' your eye*. And now Squire, let me tell you, for nothin' 'scapes me a'most, tho' I say it, that shouldn't say it, but still it taint no vanity in me to say that nothin' never escapes me. *I mind my eye.* And now let me tell you there aint no maxim in natur' hardly equal to that one. Folks may go crackin' and braggin' of their knowledge of Phisionomy, or their skill in Phrenology, but its all moonshine. A feller can put on any phiz he likes and deceive the devil himself; and as for a knowledge of bumps, why natur' never intended them for signs, or she wouldn't have covered 'em all over with hair, and put them out of sight. Who the plague will let you be puttin' your fingers under their hair, and be a foozlin' of their heads? If it's a man, why he'll knock you down, and if it's a gal, she will look to her brother, as much as to say, if this sassy feller goes a feelin' of my bumps, I wish you would let your foot feel a bump of his'n, that will teach him better manners, that's all. No, it's 'all in my eye.' You must look there for it. Well, then, some fellers, and especially painters, go a ravin' and a pratin' about the mouth, the expression of the mouth, the seat of all the emotions, the speakin' mouth, the large print of the mouth, and such stuff; and others are for everlastingly a lecturin' about the nose, the expression of the nose, the character of the nose, and so on, jist as if the nose was anything else but a speekin' trumpet that a sneeze blows thro', and the snuffles give the rattles to, or that cant uses as a flute; I wouldn't give a piece of tobacky for the nose, except to tell me when my food was good: nor a cent for the mouth, except as a kennel for the tongue. But the eye is the boy for me; there's no mistake there; study that well, and you will read any man's heart, as plain as a book. 'Mind your eye' is the maxim you may depend, either with man or woman. Now I will explain this to you, and give you a rule, with examples, as Minister used to say to night school, that's worth knowing I can tell you. 'Mind your eye' is the rule; now for the examples. Furst, let's take men, and then women. Now, Squire, the first railroad that was ever made, was made by natur'. It runs from the heart to the eye, and it goes so almighty fast, it can't be compared to nothin' but iled lightening. The moment the heart opens its doors, out jumps an emotion, whips into a car, and offs like wink to the eye. That's the station-house and terminus for the passengers, and every passenger carries a lantern in his hand as bright as an Argand lamp; you can see him ever so far off. Look, therefore to the eye, if there aint no lamp there, no soul leaves the heart that hitch; there aint no train runnin', and the station-house is empty. It taint every one that knows this, but as I said before, nothin' never 'scapes me, and I have proved it over and over agin. Smiles can be put on and off like a wig; sweet expressions come and go like shades and lights in natur'; the hands will squeeze like a fox-trap; the body bends most graceful; the ear will be most attentive; the manner will flatter, so your enchanted; and the tongue will lie like the devil—but *the eye, never.* And yet there are all sorts of eyes. There's an onmeanin' eye, and a cold eye; a true eye, and a false eye; a sly eye, a kickin' eye, a passionate eye, a revengeful eye, a manœuvering eye, a joyous eye, and a sad eye; a squintin' eye, and the evil eye; and, above all, the dear little lovin' eye, and so forth. They must be studied to be larnt, but the two important ones to be known are the true eye and the false eye. Now what do you think of that statesman that you met to dinner yesterday, that stuck to you like a burr to a sheep's tail, a-takin' such an interest in your books and in colony governments and colonists as sweet as sugar-candy? What did you think of him, eh?'"

Here is matter for Αγωγος, or the other gentlemen who teach the art of knowing the world and behaving genteelly in twelve lessons (no entrance required)! And here follows a new commentary on the much-talked-of self-assertion of the Americans,—which we give, not so much for the sake of the universal truth it contains, as for the brilliancy of the illustration,—a *Slick* pearl of the first water:—

"'Tell you what it is, Minister,' said Mr. Slick, 'I am not the fool you take me to be. I deny the charge. I don't boast a bit more nor any foreigner, in fact, I don't think I boast at all. Hear old Bull here, every day, talkin' about the low Irish, the poor, mean, proud Scotch, the Yankee fellers, the horrid foreigners, the 'nothin' but a colonist,' and so on. He asks me out to entertain me, and then sings 'Britannia rules the waves.' My old grandmother used to rule a copy book, and I wrote on it. I guess the British rule the waves,' and we write victory, on it. Then hear that noisy, splutterin' crittir, Bull-Frog. He talks you dead about the Grand Nation, the beautiful France, and the capitol of the world,—Paris. What do I do? why I only say, 'our great, almighty republic is the toploftiest nation atween the Poles.' That ain't boastin', nor crackin,' nor nothin' of the sort. It's only jist a fact, like—all men must die—or any other truth. Oh, catch me a-boastin'! I know a trick worth two of that. It aint pleasant to be your own trumpeter always, I can tell you. It reminds me,' said he (for he could never talk for five minutes without an illustration), 'it reminds me of what happened to Queen's father in Nova Scotia, Prince Edward as they called him then. 'Oncet upon a time he was travellin' on the Great Western road, and most of the rivers, those days, had ferry-boats and no bridges. So his trumpeter was sent afore him to 'nounce his comin', with a great French horn, to the ferryman who lived on t'other side of the water. Well, his trumpeter was a Jarman, and didn't speak a word of English. Most all that family was very fond of Jarmans, they settle them everywhere a'most. When he came to the ferry, the magistrates, and nobs, and big bugs of the county were all drawn up in state, waitin' for Prince. In those days abusin' and insultin' a Governor, kickin' up shindy in a province, and playin' the devil there, war'nt no recommendation in Downin'-street. Colonists hadn't got their eyes open then, and at that time there was no school for the blind. It was Pullet Thomson taught them to read. Poor critturs! they didn't know no better then, so out they all goes to meet King's son, and pay their respects, and when Kissinkirk came to the bank, and they seed him all dressed in green, covered with gold-lace, and splenderifeous cocked-hat on, with lace on it, and a great big, old-fashioned brass French-horn, that was rubbed bright enough to put out eyes, a-hangin' over his shoulder, they took him for the Prince, for they'd never seed nothin' half so fine afore. The bugle they took for gold, 'cause, in course, a Prince wouldn't wear nothin' but gold, and they thought it was his huntin' horn—and his bein' alone they took for state, 'cause he was too big for any one to ride with. So they all off hats at once to old Kissinkirk, the Jarman trumpeter. Lord, when he seed that, he was bungfungered! Thun sie ihren hut an du verdamnter thor,' sais he, which means, in English, 'Put on your hats, your cussed fools.' Well, they was fairly stumpt. They looked fust at him and bowed, and then at each other; and stared vacant; and then he sais agin, 'Mynheers, damn!' for that was the only English word he knew, and then he stampt agin, and sais over in Dutch once more to put on their hats; and then called over as many (crooked) Jarman oaths as would reach across the river if they were stretched out strait. 'What in natur' is that?' said one; 'Why, high Dutch,' sais an old man; 'I heerd the Waldecker troops at the evakyation of New-York speak it. Don't you know the King's father was a high Dutchman, from Brunswick; in course the Prince can't speak English.' 'Well,' sais the other, 'do you know what it means?' 'In course I do,' says Loyalist,' (and oh if some o' them boys couldn't lie, I don't know who could, that's all; by their own accounts it's a wonder how we ever got independence, for them fellers swore they won every battle that was fought,) 'in course I do,' sais he, 'that is,' sais he, 'I used to speak it at Long Island, but that's a long time ago. Yes, I understand a leetle,' sais Loyalist. His Royal Highness' excellent Majesty sais,—Man the ferry-boat, and let the magistrates row me over the ferry.—It is a beautiful language, is Dutch.' 'So it is,' sais they, 'if one could only understand it,' and off they goes, and spreads out a great roll of home-spun cloth for him to walk on, and they form two lines for him to pass through to the boat. Lord! when he comes to the cloth he stops agin, and stamps like a jackass when the flies tease him, and gives the cloth a kick up, and wouldn't walk on it, and sais in high Dutch, in a high Jarman voice too, 'You infarnal fools!—you stupid blockheads!—you cussed jackasses!' and a great deal more of them pretty words, and then walked on. 'Oh dear!' sais they, 'only see how he kicks the cloth; that's cause it's home-spun. Oh dear! but what does he say?' sais they. Well, Loyalist felt stumpt; he knew some screw was loose with the Prince by the way he shook his fist, but what he couldn't tell; but as he had began to lie he had to go knee deep into it, and push on. 'He sais, he hopes he may die this blessed minit if he wont tell his father, the old King, when he returns to home, how well you have behaved,' sais he, 'and that it's a pity to soil such beautiful cloth.' 'Oh!' sais they, 'was that it? we was afraid somethin' or another had gone wrong; come, let's give three cheers for the Prince's Most Excellent Majesty,' and they made the woods and the river ring agin. Oh, how mad Kissinkirk was! he expected the Prince would tie him up and give him five hundred lashes for his impedence in representin' of him. Oh! he was ready to bust with rage and vexation. He darsn't strike any one, or he would have given 'em a slap with the horn in a moment, he was so wrathy. So what does he do, as they was holdin' the boat, but ups trumpet and blew a blast in the Custos' ear, all of a sudden, that left him hard of hearin' on that side for a month; and he sais in high Dutch, 'Tunder and blitzen! Take that, you old fool; I wish I could blow you into the river.' Well, they rowed him over the river, and then formed agin two lines, and Kissinkirk passed up atween 'em as sulky as a bear; and then he put his hand in his pocket, and took out somethin', and held it out to Custos, who dropt right down on his knee in a minit, and received it, and it was a fourpenny bit. Then Kissinkirk waved his hand to them to be off quick-stick, and muttered agin somethin' which Loyalist said was 'Go across agin and wait for my servants,' which they did. 'Oh!' sais the magistrates to Custos, as they was a-goin' back agin, 'how could you take pay, squire? How could you receive money from Prince? Our county is disgraced for ever. You have made us feel as mean as Ingians.' 'I wouldn't have taken it if it had been worth anythin', sais Custos, 'but didn't you see his delicacy; he knowed that too, as well as I did, so he offered me a fourpenny bit, as much as to say, You are above all pay, but accept the smallest thing possible, as a keepsake from King's son.' 'Those were his very words,' sais Loyalist; 'I'll swear to 'em, the very identical ones.' 'I thought so,' sais Custos, looking big. 'I hope I know what is due to his Majesty's Royal Highness, and what is due to me, also, as Custos of this county.' And he drew himself up stately, and said nothin', and looked as wise as the owl who had been studyin' a speech for five years, and intended to speak it when he got it by heart. Jist then down comes Prince and all his party, galloppin' like mad to the ferry, for he used to ride always as if old Nick was at his heels; jist like a streak of lightnin'. So up goes the Custos to prince, quite free and easy, without so much as touchin' his hat, or givin' him the time o' day. 'What the plague kept you so long?' sais he; 'your master has been

waitin' for you this half-hour. Come, bear a hand, the Prince is all alone over there.' It was some time afore Prince made out what he meant; but when he did, if he didn't let go it's a pity. He almost upsot the boat, he larfed so obstroperous. One squall o' larfin' was hardly over afore another come on. Oh, it was a tempestical time, you may depend; and when he'd got over one fit of it, he'd say, 'Only think of them takin' old Kissinkirk for me!' and he'd larf agin ready to split. Kissinkirk was frightened to death; he didn't know how Prince would take it, or what he would do, for he was an awful strict officer; but when he seed him larf so he knowed all was right. Poor old Kissinkirk! the last time I seed him was to Windsor. He lived in a farm-house there, on charity. He'd larnt a little English, though not much. It was him told me the story; and when he wound it up, he sais, 'It tante always sho shafe, Mishter Shlick, to be your own drumpeter;' and I'll tell you what, Minister, I am of the same opinion with the old bugler. It is *not* always safe to be one's own trumpeter, and that's a fact."

And here, however loth, we must stop for a week.

*Grecian Antiquities*—[*Antiquités, &c.*] By A. R. Rangabé, Secretary to the Archæological Society of Athens. Vol. I. London, Bossange & Co.

All who have any pretensions to classical scholarship and taste must take an interest in this work. It is impossible to feel a genuine admiration for such of the literary monuments of ancient Greece as have come down to us, without desiring to know something of those apparently more enduring monuments, in which the genius of that extraordinary nation was enshrined, the remaining specimens of which, however, are yet more scanty and imperfect. The few relics we have are not merely valuable as works of art, and always venerable for their antiquity, but deserving of regard on account of the light they throw upon classical literature. But whatever be the feeling with which such a work as this is regarded by scholars in general, there can be no doubt that those who have any antiquarian predilections, will here find a profusion of interesting details.

The author introduces the subject by giving a rapid sketch of the archæological operations which have been carried on in Greece, particularly during the last ten years. He thus forcibly describes the way in which that unfortunate country has been deprived of those grand and beautiful productions of consummate skill which contributed so largely to its ancient splendour and renown: "Greece was destined to see herself spoiled, no less by her friends and admirers, who carried off her *chefs-d'œuvre* to Rome or Constantinople, than by her most avowed enemies, who destroyed them through ignorant barbarism and religious fanaticism, which took those noble productions of genius for the works or images of Satan." After alluding to the Parian marbles, and other valuable relics which now constitute the glory of European museums, he is led to speak of the Elgin marbles in the following terms:—

But, above all, the scientific plunders of Lord Elgin, the Turkish Ambassador of Great Britain in 1811, left the most painful impression in the mind of the Greeks, which years have not been able to weaken. Having procured a decree, authorizing him to take one or two bas-reliefs of the Parthenon, which were lying on the ground, from the Acropolis at Athens, he, in his inconsiderate zeal, bore away what remained of the south frieze of this monument; broke to pieces or destroyed, in spite of the entreaties—in spite even of the tears of the Greeks, who had not the power to prevent him—every thing that hindered him in this archæological pillage; and carried off these immortal treasures, which he gave up to the British Museum for 35,000*l.* sterling.

The author tells us, in a note, that the Archæological Society of Athens have taken steps to procure a copy of the above decree, in order to possess an irrefragable proof of the illegality of Lord Elgin's proceedings. Now, far be it from us to animadvert upon the bitter feeling here expressed. But we will simply ask this one question: if, as is well known, Lord Elgin saw enough, during his stay in Athens, to convince him that whatever might be the feelings of the Greeks so touchingly depicted by our author, these valuable remains of antiquity would soon be lost to the world through the ruthless destructiveness of the barbarous Turks, unless rescued by some immediate interposition, does he deserve to be here held up to reproach as a plunderer, seeking to gratify his avarice by making a traffic of his spoils? Lord Elgin incurred great risk and expense, without any prospect of ever meeting with a due reward. Not merely was the government of that day unwilling to assist him in his undertaking, but the great body of the artists in this country, with almost the single exception of the then youthful Haydon, were for a long time unwilling to acknowledge the value of his collection, after he exhibited it to the inspection of the public. Is it fair, then, to connect his disposal of it to the British Museum, with its removal from Greece, in such a way as to lead any uninformed reader to the conclusion that the whole transaction was nothing more nor less than a commercial job?

Shortly after the deliverance of Greece from the Turkish yoke, archæological operations were commenced under the sanction of the government; and, when the funds devoted to this purpose were exhausted, a society was formed with a view to second and carry out the efforts already made. This society has succeeded in making many important discoveries, besides completing the restoration of the Parthenon and other buildings of the Acropolis, as far as was practicable. Numerous inscriptions have been sent to them from different parts of Greece, which were found upon stones and fragments of pillars erected for political and religious purposes. Of these a very complete account is given in the work before us, illustrated by lithographic plates. Each inscription is first given in its original letters as it was found. It is afterwards expressed in ordinary Greek characters, and translated into French. The explanatory observations appended by the author, evince such an amount of learning and critical acumen, that nothing further seems to be desired, in order to entitle the work to the encouragement of all scholars.

*The Dark Falcon; a Tale of the Attruck.* By J. B. Fraser. 4 vols. Bentley.

The qualifications of the author of 'The Kuzzilbash' for the composition of a first-rate Persian tale, are too generally acknowledged to need now any discussion; nor do we think that there is much ground for the fear that he expresses whether the interest once felt in Oriental tales may not now be on the decline. First-rate talent in any department will always make its own market. The interest of the present tale is of a recent character, one of its heroes having died only some twenty years ago, and this is a circumstance in favour of its success. One thing, however, has struck us as singular in a writer so well practised—the prevalence of grammatical errors of a vulgar kind; such, for instance, as the almost uniform substitution of the accusative for the nominative case. "It is *her*," "it is *him*," "they are wiser than *us*," and such like solecisms continually offend, and much interfere with the pleasure of perusal. Such small errors, however, are amply compensated by the lively and picturesque character of the work in general, and the skilful manner in which the narrative is conducted.

The main interest attaches to the character of Jaaffer Koolee Khan, who is introduced to us as driving his way through the desert in a snow-storm, with no other object but to serve the Shah his brother;—in which perilous exploit he is assisted by Osman, or the Dark Falcon, and nominal hero of the romance. The dangers and difficulties of the transit are described with considerable force and vigour, and with an elevation of style ("though that is not much") contrasting with the rest of the work. Of the Shah Aga Mahomed Khan himself the reader may take the following description:—

"In an apartment of small dimensions, and plainly, though comfortably, furnished according to the fashion of the country, and beside a blazing fire of wood, sat a personage who, at first sight, might have been taken for a youth, so slight was his figure and such parts of his limbs as were visible, and so small his beardless countenance. But a more attentive glance would have satisfied the beholder that the high expanding forehead, corrugated by lines of deep thought, and the brows strongly knit over eyes contracted by habitual suspicion, yet bright and restless, glancing at every object, but seldom remaining fixed on any, belonged to a riper age. The general cast of the countenance was grave and anxious, though at times lit up with a gleam of fiercer expression. The mould of the features was noble, and the nose in particular, though somewhat too long, was straight and well shaped; but doubts might have been entertained as to the sex of the being to whom these attributes pertained, for the thin upper lip was destitute of mustachios, nor was a symptom of beard to be discovered on the hollow cheeks or long oval chin, from under which the skin hung in wrinkles over the shrivelled neck. Yet would the beholder have paused in pronouncing the person to be a female, for there was a tone of resolute decision upon the pale brow, an air of mental strength and firmness in the outline of the lower jaw, and a capacity in the skull, seldom to be found, save in the male sex. Nor were these delusive tokens; for he whom we have thus attempted to present to our readers was no other than the celebrated Aga Mahomed Khan, then not quite forty-four years of age, and unquestionably the ablest as he was the most remarkable man of his age and country at this time, ruler only of the northern provinces, but afterwards undisputed sovereign of the Persian empire. He was habited in a loose *chogha*, or cloak of brown cloth, lined with fur, rather the worse for wear, which enveloped him from shoulder to foot, concealing all his other habiliments, save when the thrusting forth of an arm displayed an equally shabby sleeve and vest of dark-coloured cotton-stuff. His head was covered with a cap of black velvet embroidered with gold a good deal tarnished. Before him, on the thick felt carpet on which he sat, was placed his *cullumdaun*, or writing-case, with a roll of paper and several written notes; beside it, on a square piece of padded silk, lay an old-fashioned watch in a shagreen case; and beyond these, ready for use, was placed his gold-mounted scymetar, its curved blade encircling, and guarding, as it were, the other and yet more powerful implements; an arrangement, which though probably fortuitous, afforded an apt type of the chief's own mind, relying as it did rather on policy and foresight than force—on the head and the pen rather than the hand and sword, and regarding the latter but as subsidiary to the former,—a means of resort only when these had failed, but then, indeed, to be used with unsparing severity."

By Jaaffer Koolee, Osman is introduced to the favour of the Shah, and is put in the way of preferment. Though known only as a Yemoot and a Toorkoman, such is his general appearance, that the sharp-sighted see the marks about him of a nobler ancestry. In the sequel of the story this is proved. Not having the space permitted to the novelist to support a mystery, we are compelled to tell the secret at once. A long and deadly feud had existed between the Kajars of two great families, the Ashakba Bash and Eukharee Bash. Mahomed Hoossein Khan, chief of the former, was defeated at Ashreff, in conflict with the Zend, owing to the treachery of the chief of the Eukharees. In retaliation,

many relatives and followers of the traitor were slain—and at last one Hoossein Koolee Khan Eukharee having, like others before him, rebelled, he, like them, was ruined, and all his house. Many of his family were slain; some were sold to slavery; while others fled, and never were heard of more. Among the children of the murdered father was Osman, who fell into the hands of a slave-dealer, who exchanged the child with one Oghuz Aga, for certain slaves of mature age, intended for the Oozbecks. Not a Toorkoman then, but a Kajar, Osman is qualified by birth for the highest positions of Oriental society.

The hero, of course, is provided with a heroine; Zuleikah, the daughter of the rival house, who, like himself, has been almost miraculously preserved for important purposes; namely, that by "joining with the daughter of a rival house," Osman might put an end to the hereditary feud. The event is not produced without the intervention of mysterious agency. A Dervish, a Fakeereh, and a sort of goblin imp, are the actors in this *quasi*-supernatural machinery, and do their spiriting with sufficiently startling effect. Whenever they may happen to be wanted, they are never out of the way.

The more peculiar points of the romance consist in the developement of the character of the Shah himself, with whom all natural considerations are sacrificed to his own possession of power. Three brothers he had already assassinated, in order to secure that object. Two, at the opening of this story, remain to be disposed of—"the fiery Mustapha Koolee," and "the gallant Jaaffer Koolee Khan." The former eventually lost his eyes; but his punishment was not altogether unjustified, since he had been a frequent rebel, though at the period of his death a reconciled subject, and a faithful coadjutor in the Shah's projects. The latter was ever the most devoted slave to the Shah's interests, and even reverenced his authority as divinely sanctioned. But the excess of his services makes too great a demand on royal gratitude, and excites suspicion and jealousy instead of love and admiration. The growth and operation of these odious passions in the mind of the Shah are skilfully exhibited; and his deception in betraying his worthy brother into the snare premeditated for him characteristically worked out. The following incident is striking:—

"During the perpetration of this atrocious tragedy, which consigned the noblest of the Kajars to a bloody and untimely tomb, its hateful author was enjoying the success of his perfidy in a manner which, were it not consistent with authenticated fact, might seem incredible even in a monster like Aga Mahomed Khan. Short as the time for the ulterior arrangements had been, they were so ably made that failure became next to impossible. In order to avoid all chance of interference on the part of the royal guards, whose attachment to Jaaffer Koolee was notorious, and who, it was apprehended, might rise and prevent the execution, it was resolved that it should take place just at the time of relieving guard; and so quietly, in fact, was it accomplished, that none but those concerned were aware of it until afterwards, when the body was dragged forth into the garden through the door by which the executioners entered. When Baba Khan, after hearing, not witnessing, his uncle's seizure, returned to the Shah, and, with much emotion, apprised him of the event, a sudden gleam of joy lighted up his features with a fiendish smile,—and then all was cold and calm again; nor did the uncle and nephew meet again until the hour of their evening repast. It was served in the very apartment where the last interview between the King and his hapless brother had so lately been held, and at the very hour when both knew that the murder was to take place. Yet never had Aga Mahomed been apparently more composed or free from uncomfortable feelings. He was even less thoughtful and morose than was his wont; and ate with an excellent appetite of a particular dish, which he declared to be remarkably well dressed. Not so the young Baba Khan. He regarded his terrible uncle with more than usual awe; and, as he himself has since declared, every morsel he tried to swallow stuck in his throat, for the thought of what was at that very moment going on turned him deadly sick. Scarcely could he utter a word in reply to the few remarks addressed to him by the Shah, who, when their meal was ended, bade him rise and follow him. The young man obeyed trembling, as his uncle led the way into the garden; where, stretched at length in the moonlight, the eyes wide open and starting from their sockets, yet with the smile of resignation still lingering on its lips, lay the body of his victim. The King gazed long upon the ghastly countenance; then, planting his foot upon the chest of his dead brother, he exclaimed, with a long-drawn breath, 'Ai Jaaffer Koolee! thou art now at rest—and so am I!' He paused for awhile; then, turning to his nephew, who, sick and trembling, stood behind, he burst into a passionate flood of tears and upbraided him as the cause of his destroying the brother whom he best loved. 'It is for thee, wretched boy!—for thy sake, that I have done this accursed deed!—for thee I have been guilty of the basest ingratitude, and deeply sinned against God and against man! Had that gallant spirit remained on earth, thou never couldst have reigned in Persia. 'But,' continued he, in a lower tone, 'our oath must be kept,—if not with the living, at least with the dead. Let the body be forthwith conveyed beyond the city: let it be delivered to his own people; but let it not remain even a night within the walls!' Having uttered these words, telling his beads, and muttering the customary Alhumdulillahs and Subhánullahs, he returned slowly to his own apartments."

From this account, brief as it is, the general character of Mr. Fraser's new Oriental romance may be gathered. With nothing in it that much excites the more tender emotions, there is a dash of Oriental heroism in its characters, of Oriental piety in its sentiments, and of Oriental extravagance in its costumes, which is well calculated to awaken the sense of marvel, and in some degree to gratify it. There is a care and pains-taking also in the making out of the minor details which partake of historical precision, and such a disposition of the dramatic forces as shows no "'prentice hand." Mr. Fraser seems to have felt also that a romance of this length, and on such a subject, should aspire to somewhat of the nature of a prose epic; and he has accordingly adopted, for the most part, such a severity of tone and treatment as entitles him to high commendation.

*List of New Books.*—Adcock's Engineer's Pocket-Book for 1845, fc. 8vo. 6s. roan tuck.—Biagioli's Grammar of the Italian Language, translated by J. Rampini, 12mo. 3s. cl.—Sheridan's English Dictionary, improved, by Jones, new edit. revised by Birkin, square oblong 3s. 6d. roan lettered.—Scott's (Rev. Thos.) Essays on Religious Subjects, new edit. 12mo. 5s. cl.—Stephens's History of the Church of Scotland, Vol. III., demy 8vo. 13s. cl.—Gray's (Mrs.) History of Etruria, Vol. II., post 8vo. 12s. cl.—A Journey across the Desert, by Major and Mrs. G. Darby Griffith, 2 vols. post 8vo. 1l. 1s. cl.—The Attaché, Second Series, 2 vols. post 8vo. 1l. 1s. cl.—The Young Widow, Second Series, in 3 vols. 1l. 11s. 6d. bds.—Young Love, a Novel, by Mrs. Trollope, 3 vols. post 8vo. 1l. 11s. 6d. bds.—The Despatches and Letters of Lord Admiral Viscount Nelson, edited by Sir Harris Nicolas, G.C.M.G., Vol. I. 8vo. 15s. cl.—Saint James's, or the Court of Queen Anne, by W. H. Ainsworth, with Illustrations by G. Cruikshank, 3 vols. post 8vo. 1l. 11s. 6d. bds.—Lectures on Painting and Design, by B. R. Haydon, with designs drawn by himself on wood, 8vo. 12s. cl.—Cennini on Painting, royal 8vo. 12s. cl. gilt.—Fisher's Drawing-Room Scrap-Book, 1845, 4to. 1l. 1s. elegantly bd.—Fisher's Juvenile Scrap-Book, 1845, 8vo. 8s. elegantly bd.—Forget-Me-Not (Ackerman's) 1845, fc. 8vo. 12s. roan.—Roscoe's North Wales, 8vo. 1l. 5s. cl., mor. 1l. 15s.; Ditto, South Wales, 8vo. 1l. 5s. cl., mor. 1l. 15s.—Sentiment of Flowers, new vol., 8vo. 1l. 1s. cl.—The Star of Atteghei, and other Poems, by Frances Brown, 1 vol. post 8vo. 8s. cl.—Guy's Forensic Medicine, fc. 8vo. 10s. 6d. cl.; Ditto, Part III., fc. 8vo. 2s. 6d. swd.—Stone's Practice of Petty Sessions, 5th edit. 12mo. 8s. cl.—The Monster Telescope Erected by the Earl of Rosse, with a description of the Machinery, 8vo. 2s. 6d. cl. swd.—The Statutes at Large, Vol. XVII. Part I., 7th and 8th Vict., 4to. 1l. 8s. bds.—The Missionary Reward, or the Success of the Gospel in the Pacific, by Geo. Pritchard, Esq., fc. 8vo. 4s. cl.—Bateman's (Rev. J. M. A.) Bible the Word of God, 12mo. 2nd edit. 4s. cl.—Cioccus Narrative, 3rd edit. 18mo. 2s. 6d. cl.—The Peace Reading Book, 12mo. 2s. cl. lettered.—Howard's Lessons on the Old and New Testament, 4th edit. 18mo. 3s. 6d. cl.—Mineralogy, New Library of Useful Knowledge, 12mo. 6d. swd.—Punch's Pocket-Book with Almanac, for 1845, 2s. 6d. roan tuck.—Orion's Weather Almanac for 1845, 12mo. 6d. swd.—A Dictionary of Archaic and Provincial Words, by James O. Halliwell, Part I., 8vo. 2s. 6d. swd.—Guide to Oratory, or whole Art of Public Speaking, 18mo. 2s. cl. gilt.—Manual of Colours, royal 8vo. 2s. 6d. cl.

## FOREIGN CORRESPONDENCE.

Munich, October, 1844.

It would seem as if the measures recently adopted for the protection of dramatic authorship in this country were beginning to bear fruit. At Frankfort, the flimsy melodramas, founded, by Charlotte Birch-Pfeiffer, on Bulwer's 'Night and Morning' and Frederika Bremer's 'Neighbours,' were alternated with 'Doctor Wespe,' a prize comedy. At Vienna, the clever company at the Burg Theatre was playing a new tragedy, 'Zampiero,' by Herr Halm (*alias* Count Munch-Bellinghausen), whose 'Griselda' you have noticed (*Athen.* No. 800); and a new comedy, 'Ein weisses blatt,' by Gutzkow. And here I last night fell in with another manuscript tragedy, 'Moritz von Sachsen,' by Herr Prutz—a performance in many respects so characteristic as to merit a line or two in the *Athenæum*.

Any one, before entering the theatre, would do well to arm himself with an extra stock of patience. But only a novice in Germany would venture on play-going there thus unprepared; since our good cousins sit willingly through 'Nathan the Wise,' albeit they loudly (and justly) complain of the length of our dramatic entertainments. Nay, even Schiller's 'Wallenstein,' with its magnificent poetry, its breadth of design, and elevation of sentiment, and its one or two dramatic situations of intense emotion, must be felt by nine out of ten English "sympathizers" to be ponderous and oppressive in representation. When it is said, therefore, that we were less tired than we expected by 'Maurice of Saxony,' civility is meant, and neither satire nor disrespect. Some scenes in the tragedy have vigour—an attempt at artistic construction is evident. There is a main purpose apparent, though much "sound and fury." The story is not—as too frequently happens in so-called historical dramas—encumbered with characters; and the hero—without an unfair forcing of the chronicler's privilege—fills the scenes from the rising of the curtain to the falling of the same. Who is there, in these dull times, that would quarrel with the playwright for flattering reality, and representing Duke Maurice as a sort of Grandison deliverer—assoiled from all stain of cupidity or selfish ambition, and a martyr to the strife, old as humanity, betwixt duty and feeling? Surely it cannot be amiss, when "unity" is the watchword through so many of the kingdoms and principalities here, that such an idea of the great and strong man should be represented as the type of youth, and regeneration, and freedom. In clear opposition to him, as an incarnation of the principle of the *ancien régime*, we have Charles the Fifth of Germany; but some of the sentiments put into his lips—and not put there at random—seem to me a little strange, time and place considered. Moralizing over the past, in the never-failing night-scene which dramatists give to discrowned royalties,—"When I was young," he says, "there was but one emperor, one throne, one church—and by this word I governed mankind. Times are changed—the only place for this ancient spirit is the cloister!" I know not how far the Bavarians are accustomed to apply stage sentiments, nor to what extent the Censor uses his scissors; but when I remember the excisions, by the Vienna arbiters, of passages from Schiller's 'Wallenstein,' less delicate, I cannot fancy this tragedy played in the Austrian capital. It has been prohibited in Berlin. My commendation of the author's attempt at producing something like coherence in a series of disconnected scenes, brings me to speak of the apparition of the blind Duchess of Saxony, Elizabeth von Rochlitz, who appears in the first act as a Sibyl prophesying woe, and in the last as a chorus declaring "the charm wound up"—the dark destiny accomplished. One of the best scenes is between the Emperor Charles and his Fool; and the fate of the latter, who, pranked out in royal robes, receives the sword-thrust intended for his master, moved me more than any of the more pompous incidents. But if even—despite ancient predilections—the political sorrows of Kings and Queens were not generally too remote to touch those most intimate fibres of emotion which quiver when a Wallenstein (the great com-

mander laid by) prays his house-child, Max Piccolomini, not to go from him; or when a Thekla bears up bravely while the fate of her lover is told to her; there was, on the present occasion, so much of the Cambyses' vein in the ranting of the great personages, that the most implicit (English) faith, and the quickest sympathy, must have felt themselves at fault. The Germans, however, wept a good deal. The *mise en scène* was sumptuous, without being distracting—the Emperor Charles, in particular, was capitally "got up"—and, as was fitting in this stronghold of painters, particular care had been taken authentically to "present" Lucas Kranach, who was introduced in attendance on his imprisoned master, John Frederick, Elector of Saxony.

Three years' work at Munich has made great and important changes in the place. The Ludwig-Strasse wears now somewhat of a finished appearance—an arcade at the end closing the perspective, with three Byzantine arches, and a couple of statues of marshals, as yet covered up from public curiosity. But now that completion warrants judgment, the unmistakeable flatness of the long vista, as an architectural composition, becomes tiresomely evident. Huge square blocks of building pierced with windows, devoid of frieze or cornice, however respectable when simply considered, produce, by repetition, an effect at once tame and oppressive. A like objection may be advanced to the details of decoration—the foliage of the capitals—the arabesque borders which run round the arches of the Marshal's Hall aforesaid. Not a form, not a pattern seizes the eye like the simple string-and-billet Norman mouldings, or the bold leaf of the *herba benedicta*, which is to Gothic what the acanthus was to Corinthian architecture; and should Time deal with the work according to his usual greedy plan of stone-devouring, ere twenty years are over much of the pride of King Louis's heart may be in a state little more sightly than the porous rock of a grotto, or that dilapidated piece of shell-work under an arcade in the Old Palace. To increase the chances of such a consummation, the work here, I have been told, is generally unsubstantial. When I was at Munich three years since, there had been already as many roofs on the Glyptothek, or that building was slandered.

The Ludwig's Kirche, too, is now open; so that Herr Cornelius's great fresco may be considered as fully and finally set in its frame. The building itself stands in the strange predicament of neither looking solemn enough for worship, nor sufficiently gay for the purposes of recreation; and it can, perhaps, only be classed in its right place by comparing it with contemporary modern efforts equally as pretentious—La Madeleine, of Paris, for instance. Perhaps you may admit, as a criticism, the question, "*Can* one build a Catholic church now-a-days?" which would arise as I paced the gray marble pavement, and tried to measure the polychromy of its transepts against that of the restored choir of St. Denis. At all events, if they fail here, it is not for want of resolute attempt. Three years have also made a rich change in the interior of the barn-like Basilica of St. Boniface. The twelve fresco pictures on the clerestory wall, by Professor Hess and his pupils, are all but completed, and are now to be examined better than will be possible when the scaffolding is removed, and the eye cast upward is distracted by the bice, and gold, and green, and scarlet which surround them. In my poor judgment—not forgetting the Barbarossa room in the *Festbau*—these are by much the best efforts of the Munich *frescanti*. The subjects are from the life and works of St. Boniface; and wherever the composition admits of quietism and devotional feeling, the artist has proved strong enough for his task. The embarkation of the young Monk, by Hess himself, is perhaps the best: and the group on the shore, for chastity of design and skilful combination, would puzzle most of our cartoon-men to equal it. But in all there is an edifying completeness—sure sign, that if the painter has failed, it is not for want of respect for his subject or his art. In the more stormy compositions, such as the martyrdom of the Saint, I was struck by the harsh, angular management of the lines. This I have remarked in other famous German pictures—the well-known 'Egmont and Clärchen,' in the Palace (a scene where sweetness and grace were eminently wanted)—and even in Lessing's 'Huss,' in the Stadel Museum, at Frankfort. I do not remember being thus arrested by the carpentry of the composition even in the most violent designs of those masters of the extraordinary in attitude, Rubens and Tintoretto. The manipulation of these *Basilica* frescoes is perfect. It is evident—especially on comparing them with the earlier efforts to be seen here—that the painters can now do what they like with their material—that where their flesh partakes of the jonquil (not to outrage your correspondent, who could not understand what the "lilies and roses" in the Westminster exhibition meant) it is because the artist intended it should do so, and not from any incapacity on his part to paint red, white, or bloom-colour. The delicacy of some of the tones—entirely free from meretriciousness or meagreness—is, in this point of view, satisfactory, though I question how far it is legitimate; while, again, sufficient force is attained in the shadows, without exaggeration or theatrical effect. The singular progress (to my thinking) evidenced in these frescoes, would be well taken to heart by some of our exhibitors, who fancy they are on the threshold of perfection, after a summer's experiment, whereas, here may be seen what it has required some twenty years' of undisturbed labour and practice to produce.

Meanwhile, Good Luck grant, that while riding such hobbies as his Valhallas, Basilicas, and huge Bavarias for the Theresien Wiese with that intense preoccupation which alone could bring him to the desired goal—the country's finances considered—King Louis may keep his eyes sufficiently fixed on those commonplaces which nourish and educate a people, while pictures and churches can but enchant or teach those in easy circumstances! Rumours of army discontents, reminiscences of popular tumults caused by a rise in the price of beer, are flying about, and His Majesty was advised, by his medical attendants, not to endanger himself at the *Volksfest*, which began to-day. But "these be church matters" above my handling; neither does the horse-race I have just witnessed—however whimsically memorable—concern either Art, Science, or Literature; so I had, perhaps, better close these hasty notes on progress in German drama and Bavarian fresco-painting.

## OUR WEEKLY GOSSIP.

Lady Georgiana Wolff has made a communication to the President of the Stoddart and Conolly fund, which may help to guide the public interested in her husband's fate through the maze of conflicting report to which we adverted last week. Lady Georgiana states, that she has letters from Dr. Wolff dated the 29th of July, and in August,—the particular day of the latter month not being specified,—and also from the Persian ambassador at the court of Bokhara, translated into English by the favour of Col. Shiel. The Rev. Doctor says therein, that he expects to leave Bokhara in a few days; and had received a present from the Ameer of a horse, a silver bridle, a robe of honour, and 90 ducats,—but had not yet had his audience of leave. The Persian ambassador, in a letter dated the 23rd of July, states, that he expected to bring Dr. Wolff away in about eight days. The manifesto to the Sovereigns of Europe which we published last week, assumes to be dated on the 1st of August, a few days only subsequent to the date of these respective letters; and previously to the further communication of which Lady Georgiana states herself to be in possession. The doubt which we hinted of its authenticity, seems therefore confirmed. The document in question certainly bears the character of Dr. Wolff's style;—but, as communications so direct and authentic as the above, of course discredit all statements which are at variance with them, the inference is, that either that address is a forgery, or that there is some error in its date, communicating a false view of the Doctor's present position.

We have received the following letter from the Secretary to Christ's Hospital, in answer to our inquiries, relative to Hetherington's charity for the blind (*ante*, p. 926):—

As the Clerk of Christ's Hospital, in which capacity my name appears at the foot of the advertisement of the Rev. William Hetherington's Charity to the Blind, which is commented upon in your Paper of Saturday, the 12th instant, under the head of "Our Weekly Gossip," allow me to inform you, in reply to your remarks and inquiries on the subject of that Charity, that the fund now at the disposal of the Trustees, amounting to more than 6,000*l.* per annum, is *actually* distributed by them, in annuities of 10*l.* each, to upwards of 600 Blind Persons, all possessing the qualifications described in the advertisement alluded to; that the whole annual income of the Charity, from its establishment in 1774 to the present time, has been distributed in like manner, year by year, and, consequently, the fund has not been increased by "the money feeding itself, and the charity lying idle"; but that it has been raised to its present amount by the munificent additions made to it by deed of gift, and by will, as expressly stated in the advertisement; and that the number of vacancies in the annuities, from deaths and other causes, and the number of qualified candidates to fill those vacancies, in each of the last three years, were respectively as follows—viz.:

In 1841 85 Vacancies, and 231 Candidates.
1842 83 ditto and 211 ditto.
1843 78 ditto and 227 ditto.

From this statement, it is evident that, far from finding any difficulty in distributing the funds of the Charity within the limits prescribed by the donors, the trustees have scarcely the means of granting relief to one-third of the applicants for its benefits. I am, &c. GEO. TROLLOPE.

Christ's Hospital, 21st Oct. 1844.

This answer, so far as regards the operations of the charity in question, is complete; and we are glad that our remarks have elicited a testimony so direct to the extent of its usefulness, and shall be still more so if they call public attention to a subject on which we are really in need of some further information ourselves. We need hardly say that our surprise is only increased by the statements in Mr. Trollope's letter. Six hundred persons are found to receive the continual benefits of this charity, within a field so narrowed by restrictions as apparently to exclude the great mass of cases, and embrace little more than a unit in the sum total of the blind! Upwards of two hundred and twenty candidates, on an average of the last three years, are furnished by a class thus strictly limited, as annual candidates for the benevolence of the institution:—and, with a fund of 6,000*l.* a year to distribute, the trustees can minister to scarcely more than one-third of the sufferers who appeal to them from within the close confines of this qualification! This, too, without any reference to the various institutions for the relief of the blind, existing in many other parts of England,—and which must absorb a certain proportion of the subjects answering to the Rev. Mr. Hetherington's definition! Again, we ask what are the statistics of blindness, for the whole of the kingdom?—and how is it that this calamity is not a more familiar sorrow in our daily path? Nothing in our own experience had prepared us for figures like these—and this was our sole reason for questioning the activity of the charity. We can perceive nothing in any of the limitations by which its distribution is directed—unless it be in that one which prescribes sixty-one years as the minimum of age—which should have the effect of raising the average of blindness within their particular definitions. On the contrary, many of the classes are expressly excluded from the benefits of this institution in whose numbers the rate of the calamity might be expected to be greatest—soldiers and sailors, for instance, who have suffered from long exposure to a burning climate,—and operatives engaged in trades notoriously destructive of the nerves of sight. We should be obliged to any correspondent who would furnish us with some account of this matter—the relative proportion of the blind to the entire population—the relation of numbers to age, and other leading conditions of the question—or who could refer us to some statistical table, from which we might extract the information for ourselves.

Amongst the copious materials for a history of itself, which the present age furnishes to the future—whence the distant historian of modern times may draw so many resources wanting to the modern historian of antiquity—it has been remarked, that the advertising columns of our daily Papers, skilfully read, might, alone, furnish a complete representation of the manners, habits, occupations and conditions of the people of whom they report. The skilful reading is, however, a very necessary condition of the proposition; and the puzzled historian who adopts it, will find it advisable to correct and settle his impressions by reference to some authorities more precise and less contradictory. The historian of England for the Year of Grace 1844, who shall rely too implicitly on such uncertain reporters, will be very apt to hand us down to posterity as a people of most warlike temperament, and great mechanical and engineering contrivance principally expended in the manufacture of instruments of destruction. Rockets and torpedoes, short and long ranges, shells and infernal machines of all kinds, will scarcely convey the notion of an age whose policy is peace, and

whose grand discovery is the economy of the protocol. Among other terrific manifestations of the times, the attention of the public is solicited, by a company calling itself "The Society of Practical Science and *Noble Science of Warfare*," to Mulgrave House, Fulham; where a "Series of Experiments in Warfare" is proposed for its entertainment and edification. Invisible bomb-shells, of unseen ignition—bomb-shells that ignite visibly, but explode at the first, second, or third time of striking, according to the desire of the Company—non-recoil cannon, that anybody may fire without danger (no objection, it is observed, to supply the Navy)—self-exploding rockets, without sticks, that are to burst the moment they touch their object—similar rockets, of more deliberation, that will explode at a time named by any gentleman present—hand-rockets, to be thrown from the mast-heads of ships, to the annihilation of pirates—ditto rockets which will explode upon being thrown into water if the company express a wish to that effect—and "exploding rockets of cannon," which "can be manufactured to a tremendous power, and be fired from a cannon of any calibre"—figure in the programme. Visions of the coming extinction of the species disturb the reading of an advertisement like this: and the wonder of the remote historian who commits himself to such gunpowder-records will be, that there is a posterity to hear—and that he is one of it, to tell—the story of such an age. It is a great relief to come, an inch or two down in the same column, upon another advertisement,—calculated to a great extent to neutralize the terrors of the former, and which may account to the paulo-post-futurum writer for his own existence. A philosopher, of a genius more beneficent, there announces a discovery, which in part accomplishes the haunting wish of ages—solving that secret, to come at which many a midnight furnace blazed through the dark ages, and many a lamp of life was wasted in the vain labour to compose the oil which was to keep it burning for ever. The discovery in question is one "by which certain serious affections and *sudden death* may be *effectually prevented*." Death, then, is at length conquered, in one of his most fearful modes of operation; and the advertiser has but to carry his discovery a step further—by some chemical combination to obliterate the word *sudden* from his proposition—and the dream of ages is realized! Meantime, his discovery, in its present extent, seems expressly directed against that class of "winged deaths" which the bullet brings: and unless the "Society of the Noble Science of Warfare" can buy up, and suppress, his secret, they are labouring and exhibiting in vain. All their life-destroying engines are to be seen, as they announce, at the reasonable price of five shillings;—but it would cost *us* something more to attend,—because we should take a bottle of the new *Elixir vitæ* in our pockets.

The *Inverness Courier* states, that "Thomas Campbell has left among his papers a memoir of his own life, a number of letters, and some unpublished pieces of poetry," and that "these are now in the possession of his friend, Dr. Beattie."

We have to announce the recent death, in London, of Mrs. Henry Siddons, better known in the circles of Edinburgh, than our own, as having been long the leading actress of its theatre: but wherever known beloved, for her extraordinary worth and amiability.

The West-India papers have brought intelligence of an earthquake which has been felt in several of the islands, including St. Vincent's, Trinidad, Grenada, and British Guiana. No mischief is yet known to have been done; but at Trinidad, the shock is described as having been the severest which has been felt there since 1825. At Guiana, the phenomena which preceded the convulsion itself are thus described:—"A strong westerly, or land wind, transmitting the most unpleasant sensations through the bones of the invalid, prevailed until about sunset. After dark, a vehement tempest of thunder and lightning came on. Every other minute, the horizon was one blaze of blue light of intense brilliancy, which cast an unearthly aspect over the be-lated wayfarers in the streets, anxious to gain the shelter of the humblest home. Calms succeeded, separated from each other by light, variable and warm gusts of wind. After the moon had risen, the squalid face of nature indicated a distempered condition. The luxuriant boughs of our intertropical trees drooped heavily. Had the brute creation been awake, it was just such a season as would have overwhelmed them with instinctive dread of some unknown calamity near at hand. In different parts of the town, some watch-dogs howled mournfully. This is no overwrought description. We detail what multitudes witnessed, who were unable to enjoy their wonted repose during those hours of anticipated horror. About half-past three o'clock in the morning, the earthquake occurred." The singular state of electrical disturbance which has been registered for many months past, has prepared the mind for reports of phenomena like this, and created the apprehension of calamity, which in this case has been happily averted.—The American mail brings the afflicting intelligence from New Orleans, of the utter destruction of the town of Matamoras, by a hurricane.

Isola Bella, Oct. 6th, 1844.

Our private letters from Milan state that the scientific meeting went off most brilliantly, and more strangers were seen at Milan, than on any other occasion since the coronation. During the fifteen days which it lasted, Milan was a continued scene of bustle and festivity. The number of members inscribed on the list of Savans, was 1,159, besides 2,000 amateurs, who enjoyed the privilege of being present at the meetings. A great deal of good work was done. The Viceroy invited a certain number of Savans to the Palace, Count Borromeo maintained a princely hospitality, having, nearly every day, forty members at his table. A *table d'hôte*, where five hundred persons sat down daily, was provided by the municipality, at a moderate charge; conversazione rooms were opened every evening, and every kind of attention was heaped upon the members. The Geological Section was very strong. Von Buch, notwithstanding his advanced age, took a most active part in every discussion, and it was quite delightful to see how much he enjoyed his visit. Of our countrymen there were present Lord Northampton, Lord de Mauley, Sir Robert Inglis, Dr. Roget. The number of passports that went through the police office during the fortnight, was 34,000. Every hotel was crammed.

The booksellers of Frankfort and Stuttgardt have assembled at Heidelberg, for the purpose of conferring as to the measures to be adopted for freeing themselves from the sort of sovereignty exercised by the booksellers of Leipsic over the publishing trade of Germany. They intend, it is said, to select Frankfort or Stuttgardt as the central depôt for their publications; and to have in both towns commission-houses where the trade can immediately supply themselves. This measure involves a very serious attack upon the prosperity of Leipsic,—which, as our readers know, has long had a sort of monopoly of supplying the different booksellers scattered throughout Germany.

The Congress of Orientalists sitting at Dresden has been momentarily troubled by an incident, whose ultimate effect, however, has only been to mark more strongly the improved tone of toleration spreading through Germany. Three members of the assembly are Rabbins; and Professor Weber, of Bremen, the only remaining town in Germany which excludes the Jews, had the taste to indulge in some pleasantries pointed at that people. The other Christian members of the assembly, forty-two in number, rose to a man; and Herr Thiersch, the celebrated linguist, in their name rebuked the Professor for his introduction of religious distinctions into a society purely scientific in its purposes. Herr Weber was refused the opportunity of reply, by the President; who decided, amidst the applause of the meeting, that the affair should terminate with the just remarks of Herr Thiersch,—and the discomfited Professor left the assembly. A few minutes afterwards, a letter was delivered to the President, in which Professor Weber disclaimed the intention of offending the Hebrew members, and retracted such words as might bear that construction; but he did not again appear at the Congress, and shortly afterwards quitted Dresden.

At Stockholm, one of those exhibitions of the products of the national manufactures, which are a remarkable feature of the times, has been opened in the Palace of H.R.H. Prince Gustavus; and colossal statues, in marble, of the Swedish Kings, Gustavus II., Charles X., Charles XI., Charles XII., Charles XIII., and Charles XIV., executed at Rome, by two Swedish sculptors, Messrs. Bystrom and Fogelberg, pupils of Thorwaldsen—have been erected in the Throne-room of the royal residence.—From Rome, we learn that a committee is engaged in conducting the erection of a monument, in that capital, to the memory of Tasso, to which the King of the French has subscribed 1,000 fr.:—and from Lausanne, that a monument to Laharpe was inaugurated, in his native town of Rolle, in the Canton de Vaud, in the presence of deputations from the principal of the other cantons, on the 28th ult.

A special Order of Merit is to be created, for such manufacturers as shall distinguish themselves at next year's Exposition in Vienna—which order is to confer the personal privileges of nobility. Medals of gold, silver and bronze will be also distributed.

The *Revue de Paris* mentions, on the authority of a letter from Basle, that an engineer of eminence has been commissioned to examine into the practicability of a railway from that town to Olten, across the Jura,—with branches to Zurich, Lucerne, and Soleure.

The same paper states that Taglioni has signed an agreement with a speculator from New York, Mr. Trenk,—by which she engages to accompany him to America, and play at all the States and on all the theatres which he shall appoint. Mr. Trenk is to pay all travelling and other expenses, and share the produce with Mdlle. Taglioni,—guaranteeing to her only a minimum benefit of 5,000*l*. So great is the desire to see the Taglioni beyond the Atlantic, that the American is thought to have made an excellent bargain.—An American paper states that Macready has cleared by his professional labours in that country, after all deductions, between 50 and 60,000 dollars; and boasts that he has invested a portion of his receipts in the Ohio 5 per cents,—from whence the editor draws the consolatory assurance that talent is still appreciated, and so are the American funds.

From Paris we learn that an English company will divide the nights of the coming winter, at the Théâtre Ventadour, with the Italians. Macready and Miss Helen Faucit are announced to appear on the 25th of November in Shakspeare's Othello. We hear also that a new circus, to be called the *Hippodrome*, is about to be erected in that capital, beyond the *Barrière de l'Etoile*,—and placed under the direction of Messrs. Ferdinand Laloue and Victor Franconi. In its arrangements, and the character of its performances, it will recall, as its programme states, the ancient Roman circus. We do not hear of lion-fights, nor combats of gladiators; but there are to be horse, chariot, and foot-races, triumphal marches, &c. The works are to commence in January,—and will, it is said, be finished in the month of April. The building will accommodate from 10,000 to 12,000 spectators. The arena will be open to the sky;—the spectators, assembled in amphitheatres at the two extremities, and in galleries at the two sides, will, however, be sheltered from the sun and rain,—and the performances will take place between the hours of three and five in the afternoon.—Among publications in the same capital, we notice that of the 'Fables of Babrius,' after the manuscript discovered in the Convent of Mount Athos, by M. Minoïde Minas,—intrusted to M. Boissonade for the purpose, by the Minister of Public Instruction, M. Villemain. The Greek text is accompanied by a Latin translation, and illustrated by notes.

The *Augsburgh Gazette* states that, on the 4th ult., Donizetti's opera of *Lucrezia Borgia* was performed at the Rossini theatre of Leghorn,—Prince Charles Poniatowski playing the part of the Duke of Ferrara, the Princess Eliza Poniatowski that of Lucrezia, and Signora Corinna Nanni, by birth Corinna Luigi, that of Matteo Orsini. The choruses were composed of persons in the highest ranks of society; and the performance was for the benefit of the *Asili infantili di Carità*. On the 7th the opera was repeated, with the same cast; and an inscription on marble records the fact to posterity.



MEETING FOR THE ENSUING WEEK.

Fri. Botanical Society, 8.

## MISCELLANEA

*Paris Academy of Sciences.—Oct.* 7.—M. Arago made a communication from MM. Laugier and Mauvais relative to the comet recently discovered at Rome. These gentlemen having been forcibly struck with the analogy between this comet and that observed by Tycho Brahe, in 1585, applied themselves to new observations, the result of which has convinced them that this is the same comet.—M. Bessel made another communication respecting the motion of Sirius and Procion. This motion, he says, can be explained by no other hypothesis than that of their revolving round an obscure star.—M. Arago announced the receipt of a barometer by M. Kuppa, of Russia, which possesses, he says, great advantages in point of correctness and power over any that has hitherto been made.—M. Beautemps Beaupré presented the sixth and last part of his work on the western and northern coasts of France. It contains more than 500 plans, charts, and views.—M. Ballard read a paper on the means of extracting from sea-water the sulphates of soda and potass in sufficient quantity for all the purposes of commerce, without having recourse to the present expensive process. Hitherto it has been found impracticable to obtain the sulphate of soda from sea-water in abundance; but M. Ballard has been able, from an evaporating surface of 200 hectares (about 500 English acres,) to obtain 2,500,000 kilogrammes in one year. We extract from the paper of M. Ballard, showing the causes which have hitherto prevented such results, and his means of remedy:—"When two salts differ in their acid and their basis, and a double decomposition is possible, the presence of the first may favour the solubility of the second. When these two salts have, on the contrary, the same acid and the same basis, and the double decomposition is no longer possible, the same phenomenon does not take place. The solubility of one of the salts is diminished by the presence of the other, except in the case of the formation of a double salt. Thus, the hydrochlorate of magnesia impedes the solubility of sea-salt, because it is an hydrochlorate, and that of the sulphate of magnesia, because it is a salt of magnesia. It favours, on the contrary, the solubility of sulphate of soda, because probably, in this case, the double decomposition takes place. The solubility of the sulphate of soda is even diminished by the presence of the sea-salt, because it is a salt of soda. The solution of the problem is simple. Since the hydrochlorate of magnesia impedes the solubility of the sulphate of magnesia, and the chlorurate of sodium, between which the decomposition is to be effected, and, on the contrary, favours the solubility of the sulphate of soda to be precipitated, it must be driven off. Since sea-salt impedes the solubility of sulphate of soda, and favours the precipitation of the product to be isolated, a further quantity must be added. To extract from the water the sulphate of magnesia, to eliminate the chlorurate of magnesia, and to add sea-salt in excess, such is the process to be carried on." M. Ballard adds that the sulphate of soda thus obtained is hydrated, but pure; it does not contain sulphate of magnesia, and is free from the excess of acid and the proportions of iron which are frequently found in the sulphate of soda of commerce.

*Pneumatic Marine Preserver.*—We extract the following paragraph from the letter of a correspondent to the *Times*:—"There is a plan now before the government, called 'the Pneumatic Marine Preserver,' for making every description of 'boat,' a 'life-boat,' without breaking the stowage, or interfering with shape, build, or nautical appearance,—or rendering the boat fitted, in the slightest degree less useful for the purposes for which ships' boats are intended."

*An Iron Life-boat.*—About twelve months ago a subscription was raised at Havre for the construction of an iron life-boat. This boat being finished, was a short time ago submitted to trial in the presence of a committee appointed for the purpose, who declared it to be perfect; and, consequently, it is now placed at the port for service, in case of need. It is built of cast-iron sheets, is 26 feet 3 inches in length, and 5 feet 3 inches in breadth. The reservoir of air is divided into three compartments, perfectly distinct from each other, so that any accident happening to one of them would not destroy its buoyancy. Self-acting valves let in or out such quantities of air as may be required to preserve its equilibrium, according to the weight with which it may be charged, and, by means of a water-proof cloth, so arranged as not to confine the motions of the rowers, excludes the possibility of its being swamped by shipping water.—*Times.*

## FOURTEENTH MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

[*From our own Correspondents.*]

### WEDNESDAY, OCT. 2.

### SECTION A.—MATHEMATICAL AND PHYSICAL SCIENCE.

The ASTRONOMER ROYAL commenced the proceedings by giving an account of the state of the reductions of the Planetary and Lunar Observations made at Greenwich. He announced that the planetary observations had been reduced by the aid of the best tables, and their places deduced and compared with those given in Bessel's tables; and this portion was complete. The reduction and comparison of the lunar observations, the superintendence of which had also fallen on himself, had been commenced more lately: and this he characterized as by far the most important astronomical work which had been for many years undertaken. Damoiseau's tables had been used. In them, the centijournal division of the circle was introduced, which afforded much facility in the calculations, and thus the observations reduced by the aid of the best lunar theory would be compared with the best tables extant. A few months would now complete the calculations; but the printing had not yet commenced. Fourteen computers were constantly engaged upon them; and by certain improvements which he had introduced into the methods of computing, such as discarding the use of the negative sign altogether, by increasing the quantities from which they could result by a constant number, generally 100, he had been able, in many instances, to avail himself of the assistance of the boys of the national school as computers, and thus saved the heavy expense of the more experienced persons. The lunar observations reduced, amounted to about 9000; and the computations were made in duplicate, for the purpose of detecting errors.

The ASTRONOMER ROYAL then gave an account of the results of the Tide Observations on the coast of Ireland.—He introduced the subject by stating, that during the Ordnance survey, it had been desired to fix upon a datum plane, and that at first it was intended to assume the level of low water at spring tides as that datum. But the researches of Dr. Whewell having shown that level not to be invariable, Colonel Colby became desirous of ascertaining whether one invariable and certain datum plane could be obtained. For the determination of this, Ireland seemed to present peculiar facilities; for, during the Ordnance survey, it had been levelled from shore to shore, not only longitudinally, but also across, in lines as nearly parallel as could be accomplished; the result of which was, that round the entire coast many points were marked where the relative level to one common point, the sill of one of the dock gates in Dublin, were known certainly, to within a very few inches. It was, therefore, resolved to observe, simultaneously, and for a considerable period, the tides round the entire coast, in order to ascertain whether, from their phenomena, such a certain and readily determinable datum plane could be deduced. In these observations, besides having all the measures of height reduced to this one common standard, it was also determined that all the observers should be furnished with chronometers set to one common time, viz. mean time at the Greenwich Observatory. The first peculiarity observable was, that while the south-western and western coast was quite open and exposed to the Atlantic, the north-eastern and eastern coasts were, on the contrary, quite embayed, and in particular as the channel became very narrow between Donaghadee and Portpatrick, and indeed the entire Scotch coast to the Mull of Kintyre, they were prepared for, and found, much irregularity and confusion of the tides on the north-east coast. He need not then particularize all the motives which swayed them, but state generally that twenty-two stations round the coast were fixed upon. On the 22nd of June 1842, they had all their observers at the several stations, and the observations were continued day and night for full two months, viz. until the 26th of August. He need scarcely say, that there were four critical phenomena or periods, each twenty-four hours, to be noted carefully, viz. the instants of each of the two high waters, and the instants of each of the intervening low waters, and although the season was chosen, so that the nights should be short, yet one at least of these four critical phenomena must occur in the night: as it would, therefore, be too laborious to record at sufficiently close intervals during the entire twenty-four hours, the orders given to the observers were to be at their posts at least half an hour before by any possibility each of these four states of the tide could occur, and then to record every five minutes the actual height, and to continue the registrations until the tide had taken a decided turn. At some of the stations, however the observations were made continuously during the twenty-four hours; to one of them, Courtown, he should have to direct particular attention. The researches of Prof. Whewell and of Sir John Lubbock had rendered a close attention to the diurnal and semi-diurnal inequalities of the tides a matter of interest. One of the earliest and most immediate results of these systematized observations was, that the high tide was found to be simultaneous along the entire western and south-western coasts. It was also simultaneous along the eastern coast, but, strange to say, with a jump of no less than six hours between these two clearly defined times of high water: so that they were met in the first stage of their speculations by the fact, that there was a difference of no less than six hours between the time of high water at Skibbereen and at Dublin. This was, for a time, a puzzle; but from it might be inferred what they afterwards found verified by the observations at Courtown, that a node, or place of no tide, must occur at some intervening place. The observations have been grouped and discussed by the new mode pointed out by him in the Philosophical Transactions for 1842, in which the heights were expressed as a function of the times by the following formula: $L = A + B.\sin\theta + C.\sin(2\theta + c) + D.\sin(3\theta + d) +$ &c. By this method, about 1400 individual tides, observed at all the stations, had been discussed. From this discussion, it appeared that the great tide wave was two days old when it reached Ireland, and that the solar effect exerted in raising the water, was about one-third of that of the moon, if the deductions were made from the tides of the more open western and south-western parts of the coast; while the inferences deduced from those of the north-eastern coast, would make it only the one-sixth of the lunar influence. This difference doubtless arose from the irregularities observed in the tides of the north-eastern coast, for which they found a ready explanation in the enormous amount of the semi-diurnal inequality which there manifested itself: the semi-menstrual inequality was also found to be considerable there. Another remarkable and unexpected irregularity also resulted from these discussions: which was a difference of no less than one foot between the mean heights of the tides of the western and southern, and the north-eastern coasts; the mean heights of the tides, or values of A, in the preceding formula, being one foot greater for the north-eastern than for the south-western stations: and this fact afforded the most demonstrative proof of the accuracy of the observers, for while it manifested itself most distinctly at each of the stations in going round the coast, its amount and the law of its variations were so consistent, as to render it absolutely impossible that it could have resulted from careless observations. He then directed attention to the Courtown station, stating that at the commencement of their labours here the observers had found it impossible to comply with the instructions which had been furnished to them, for they found that they could not, by any diligence, anticipate the times of high or of low water by half an hour, or even an hour. The result was, that of themselves they adopted the prudent course of giving up any attempt at such anticipation, and observed the height of the tide every five minutes throughout the twenty-four hours. This was a fortunate circumstance, for in consequence of being

in possession of these, almost continuous observations for such a period, he had been able to make out the law; which, under other circumstances, might have long continued to perplex. It was found that tides very small in their actual amount, sometimes not more than a few inches, but very numerous, were continually succeeding each other at irregular intervals; and this was very clearly traced to the influence of the relatively large amount of the solar tide; which modified, what might be considered the true tide of the place, very differently according as it arrived at the place an hour or two before, or an hour or two after the coming of the sun to the meridian. The Astronomer Royal said that he was preparing a detailed account of these observations; and he closed by saying, that in reference to the object for which they had been chiefly undertaken, it was now obvious that no fixed plane sufficiently determinate for engineering purposes, could be deduced from the phenomena of the tides; at least those observed on the coast of our island or continental seas.

'On the Curves of Annual Temperature at York,' by Prof. PHILLIPS.—The author stated that the data which he had collected extended over long periods, one series including twenty-five years' registration of the barometer, thermometer, and ancient hygrometer, and that they had been so far discussed as to give interesting results, and that on a future occasion, he hoped to present the complete analysis and inferences.

Mr. SCOTT RUSSELL then, on the part of Sir Thos. Brisbane and himself, gave a final report 'On the Tides of the East Coast of Scotland.'—The discussion of the observations was now complete, and they were ready for publication. The chief part of the results had been reported last year, but there remained a few interesting points which had been brought out by the recent discussions. The chief of these was the determination of the *diurnal inequality in the time* of high water, a phenomenon which, as stated by Mr. Lubbock, has not been discovered on our coasts. This inequality had been manifested in a very prominent form in these observations on the east coast of Scotland; and diagrams were exhibited, in which not only its existence was marked, but its magnitude was measured, and was so great, that the time of high water of successive tides varied, with 25° of declination, as much as from 30 to 80 minutes from this cause. Tables were also given, showing its amount in various ports along the coast. He attributed the detection of this inequality, which had hitherto escaped notice, to the methods of observation which had been employed. His system was to employ, instead of the mere observation of the height and time of still water, or the cessation of rise and the commencement of fall, a continuous series of observations every five minutes on time and height. This series was registered continuously night and day, and the observations were all laid down on ruled paper in a wave curve, from which the observations of time and height were deduced. It was the accuracy of the system of discussing individual wave curves, instead of mere observations of height and time, which had enabled him to detect phenomena that had formerly escaped observation; and he was glad to find that Prof. Airy had recommended and adopted that method in his recent observations on the tides of Ireland. Another advantage which the method of observation and discussion of individual wave curves produced, was that tolerably correct tables, for the prediction of tides, might be formed from a very short series of observations. He had found Mr. Lubbock's tables of the tides of Leith, deduced from many thousand observations, to be very accurate; and from them the tides of Leith were predicted so as to coincide exactly with the phenomena. But, by the method of observation now mentioned, he had formed tables from a few weeks' observations, which coincided quite as accurately with Mr. Lubbock's tables as those with observation. He concluded by noticing an ingenious Self-Registering Tide Guage, invented by Mr. Wood, of Port Glasgow, which was so simple as to be constructed to register heights at a cost of two or three pounds, and to register time at a cost of ten pounds. He was happy to add, that tide guages of this kind were now being erected at Cork.

'On the Nature of the Sound Wave,' by Mr. SCOTT RUSSELL.—He had determined the existence of certain orders of water-waves governed by different laws, and it was necessary, for the explanation of the phenomena of sound, to determine to which of these orders it was analogous. It was generally supposed, that the sound wave was analogous to the waves formed by dropping a stone into the waters of a quiet pool. These were waves of the second order. But his experiments had led him to suppose, that the sound wave was a wave of the first order analogous to the wave of translation in water. This determination would effect considerable change in our conception and explanation of the phenomena of sound at present ill understood. For example—the theory of the speaking-trumpet had been given in many opposite forms by different mathematicians. But it was found that the forms assigned by them were nearly opposite, while their effects were nearly identical. This was just what would result from the theory of the wave of the first order. But the whispering gallery was still more inexplicable on the old theory; the dome of St. Paul's was an instance—quite inexplicable on the old hypothesis, but his experiments upon it had proved, that the wave of sound did, in that case, obey implicitly the laws of a wave of the first order, and on that theory its phenomena were completely explained. By considering the sound wave as a wave of the first order, it was now easy to determine the principles on which buildings for speaking and hearing should be formed.

'On the Propagation of Waves in a Resisted Medium, with a new Explanation of the Diffusion and Absorption of Light, and other Optical Phenomena,' by the Rev. M. O'BRIEN.—The author notices two different hypotheses which may be made respecting the mode of action of the particles of a transparent medium on the vibrations of the ethereal fluid within it. The first, "that the transparent substance exerts upon each element of the ethereal fluid forces which depend simply upon the displacements of that element relatively to the contiguous particles of matter:" this will be so, when the amplitudes of the vibrations or maximum excursions of the elements from their positions of equilibrium are extremely small relative to the intervals between the particles of the transparent substance. The second, "that the forces exerted by the transparent substance upon any element of the ethereal fluid are of the same nature as the resistances experienced by a set of particles moving through a resisting medium, depending not upon the relative displacements, but upon the state of motion of the element. This will be the case when the amplitudes of the vibrations are large, compared with the intervals between the particles of the transparent substance. The author then proceeds to show that M. Cauchy's equations are founded upon assumptions equivalent to the first of these hypotheses: and gives reasons for not admitting it, stating that though the explanation that author derives from dispersion is satisfactory, the explanation of absorption is really fallacious. He then proceeds to examine, mathematically, the consequences of the second hypothesis, which he conceives has not yet been taken up by any writer upon physical optics, and proceeds to show the probability that it may be of much service in advancing the undulatory theory of light.

'On the Summation of Infinite Series,' by Mr. RAWSON.—This was a mode of combining the theorems of Laplace and Taylor in such a manner as to render series very rapidly convergent, so as greatly to facilitate the calculation of tables, and to render other arithmetical processes more convenient than at present.—Mr. HODGKINSON pointed out its important relations to some of the more general processes of integration.

'On a singular Effect of the juxta-position of Certain Colours under particular circumstances,' by Prof. WHEATSTONE.—Having had his attention drawn to the fact, that a carpet worked with a small pattern in green and red, when illuminated with gas-light, if viewed carelessly, produced an effect upon the eye as if all the parts of the pattern were in motion; he was led to have several patterns worked in various contrasted pairs of colours; and he found that in many of them the motion was perceptible, but in none so remarkably as in those in red and green; it appeared, also, to be necessary that the illumination should be gas-light, as the effect did not appear to manifest itself in daylight, at least in diffused daylight. He accounted for it by the eye retaining its sensibility for various colours during various lengths of time.

SIR DAVID BREWSTER stated that he and Prof. Wheatstone had brought to York separate communications on this experiment, with specimens of the rug-work in which it is best exhibited. Having seen Prof. Wheatstone's specimens, he had been induced to limit his communication to a few observations on Prof. Wheatstone's paper. When Sir D. Brewster came to York, he was not aware of the phenomena taking place with any other colour but *red* and *green*. Prof. Wheatstone had, however, shown him that *red* and *blue* answered equally well; and he had received letters from two ladies in Scotland, who had not only found that *red* and *blue* exhibited the phenomenon, but had both given the probable explanation of their doing so, by ascribing it to the *blue* becoming *green* in the *yellow* light of the candle.

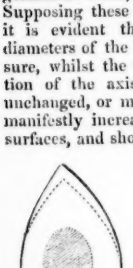
In order to give an explanation of what has been called by some the *flattering hearts*, from one of the colours having the shape of hearts, Sir D. Brewster mentioned an experiment for the purpose of showing, that any fixed object will appear to move on the ground upon which it is fixed, when the light which illuminates it is constantly changing its position and intensity. This experiment consists in moving a candle rapidly in all directions, in front of a statue. The varying lights and shadows produce varying expressions, which give the appearance of life and motion in the features of the statue. Now, in the case of the vibrating hearts, the mixture of the *red* and *green*, whether seen as direct or as accidental impressions, produces successions of light and shadow which give the appearance of motion to the figure upon the *red* or *green* ground. This effect is greatly increased by that remarkable property of oblique vision, in which the retina increases in sensibility as the point impressed is removed from the *foramen centrale*. Hence when we look fixedly at one of the vibrating hearts, it nearly ceases to vibrate, while the others, which are seen obliquely, vibrate with greater distinctness. The phenomenon has been stated to be invisible in daylight; but Sir D. Brewster mentioned that he had, that morning, found that it took place in daylight, provided the coloured surface was illuminated from a small hole in the shutter of a dark room. The experiment, indeed, he found to fail even in candle light, if the illumination proceeded from a great number of lights, or from a mass of light producing a *quaquaversus* illumination like that of the sky. He referred also to the effects produced by coloured glasses, and mentioned some facts regarding the unequal absorption of the two colours, which, in drawing conclusions from such experiments, required to be attended to.

'On the Double Square Representation of Prime and Composite Numbers,' by Prof. SYLVESTER.—He first alluded to what had been done by the French mathematicians; and then pointed out the manner in which he thought numbers might be conceived to be composed of squares; and concluded by mentioning some of the advantages which might be expected from this mode of considering them.

'On the Accommodation of the Eye to Various Distances,' by SIR DAVID BREWSTER. He commenced by giving a sketch of the opinions of several philosophers, as to the mode in which the eye acquires its well-known power of accommodating itself to distinct vision at various distances, and the experiments of Troughton and others, with a view to determine the question. He then stated that he had ascertained a fact, which he considered to be one distinct step towards the desired explanation, although he must admit that he could not as yet satisfy his own mind with any of the explanations which he had given, nor as yet fully point out how the fact he was about to mention would aid in that explanation. This fact is, that if an object be so placed relatively to the eye as that it is not seen distinctly, distinct vision will be instantly acquired by directing attention to some intermediate object.

He was not prepared to say in what manner this produced the effect, but he was inclined to believe that it, as it were, compelled a kind of squinting view of the object to be taken.

Prof. J. D. Forbes observed, that he had for some time entertained an opinion as to the mode of adjustment of the eye for different focal distances, not open to the well known objections to all the theories hitherto proposed. According to this view, the crystalline lens is loosely suspended amidst fluids capable of conveying a uniform hydrostatic pressure to all parts of its surface. That pressure results from a voluntary effort felt by every person to be made when the focus of vision is suddenly changed, and which is exerted by the *recti* muscles upon the exterior of the ball of the eye, and communicated to every particle of its contents. Such a pressure must tend to *shorten* the focal length of the crystalline lens, which is well known to consist of a condensed spheroidal nucleus, surrounded by soft gelatinous coats, which give it the lenticular form. Supposing these last to be the more compressible, it is evident that the vertical and horizontal diameters of the lens will be diminished by pressure, whilst the *thickness* of the lens in the direction of the axis of vision, is likely to remain unchanged, or may even be increased; which will manifestly increase the curvature of the refracting surfaces, and shorten the focus.



The shaded part represents the dense nucleus: the dotted line the form of the lens under pressure.

Sir David Brewster suggested that, perhaps, if he froze the lens when in the relaxed and when in the compressed state, he might then be better able to obtain the required movements.

Sir David Brewster gave a verbal account of a series of experiments *on the polarization of light by rough surfaces*, and *white dispersing surfaces*. These experiments were made with one or more surfaces of ground glass having different degrees of roughness, and upon paper, snow, and white painted bodies. The state of polarization was ascertained by the polariscope with parallel bands, and its amount measured with the polarimeter which he had invented for this purpose. In polarizing light, the atmosphere acts like a rough surface, and hence these experiments had an application to that new branch of optical meteorology. The degree of roughness in transparent bodies, was ascertained by observing the angle of reflection at which a small circular luminous disc, either disappeared or began to lose its distinctness of outline. The general effect of roughness of surface is to diminish the degree of polarization which would have been produced at the same angle by the surface when smooth. In the case of white dispersing bodies, the intromitted pencil, polarized by refraction, is again reflected, and more or less neutralizes the pencil, oppositely polarized by reflection.

'On a Theory of Quaternions,' by Sir William Hamilton. It had been found that by adopting a symbol $i$ for the imaginary quantity, $\sqrt{-1}$, the rigorous processes of algebra, as had been shown by Mr. Watson and others, led to results which admitted of real interpretations, such as compositions of linear motions and relations in one place. By the adoption of two other imaginary symbols $j$ and $k$, and assigning to them certain definitions or assumptions, which however are not purely arbitrary, and for which, as well as for the assuming of the symbols themselves, the paper assigns reasons, combining them in a quaternion of the form

$$Q = \omega + i\,x + j\,y + k\,z$$

the author states that he has established rules and theorems for the symbolic addition, subtraction, multiplication, division, involution, evolution, and logarithmation, of such quaternions; has assigned geometrical constructions corresponding; and from this *Calculus of Quaternions* can deduce or express every theorem of spherical trigonometry; and almost every result of this calculus can reciprocally be so constructed as to suggest (and at the same time prove) a theorem of spherical trigonometry.

TUESDAY.

Section C.—GEOLOGY AND PHYSICAL GEOGRAPHY.

'On the Discovery of an Iron Nail in a Block of Kingoodie Stone, at Mylnefield, Perth.'—Mr. Warburton expressed his opinion that this, and many similar accounts, were as apocryphal as the alleged discovery of toads in solid masses of stone.

'On the relative Age and true Position of the Millstone Grit and Shale, in reference to the Carboniferous System, in the British Penine Chain,' by J. Rooke.—The author states that all the highest elevations forming the watershed of the Penine Chain are composed of millstone grit and shale, whilst the valleys are occupied by carboniferous limestone, which he conceives was drifted in at a subsequent date, and alternates with a newer millstone grit, corresponding to the old and new red sandstones. This theory, which is entirely at variance with the researches of all geologists, the author explains by another theory of the origin of these formations by currents from the coast of Norway and the Irish Channel.

'On the Toadstones of Derbyshire,' by J. Alsop.—Mr. Alsop observes, that many mining operations have been recently made in Derbyshire, with the view of finding a continuation of the veins beneath the beds of toadstone,—experiments which are very difficult, owing to the thickness of the toadstone, and uncertain in their results, on account of the varying character and productiveness of the strata and veins. In the section of Crich Cliff a bed of clay, about a foot thick, becomes, within a short distance, fourteen fathoms thick, and contains large and hard nodules of toadstone; and the thick bed of toadstone sunk through at one shaft, diminishes to a foot or two in thickness at the other. In the Worksworth district, the "great clay," containing blocks of toadstone, is clearly proved to be the same as that at Crich, by the three beds of clay below each; of these the first or "twenty fathom" clay is unproductive; the second or "bearing clay" is seventeen fathoms lower; and the third clay, which is five fathoms lower still, is remarkably undulating. These "three clays" are also recognizable at the Snitterton mines, but here what was a thin bed of clay at Crich and Worksworth becomes a bed of toadstone about twelve fathoms thick. The second toadstone at Snitterton is similar to the one at Crich and the great clay at Worksworth, and the limestone resting upon it is similar in its character; there is also, apparently, another toadstone bearing the same relation to the second as the twenty fathom clay at the other places; it is seen at the section of Bonsall, where the three clays and two beds of toadstone beneath them are well known.

'On the Stratification of Grassington Moor,' by Capt. Eddy.—Capt. Eddy exhibited a model of a portion of the Grassington lead mines, near Skipton, in the West Riding, the property of the Duke of Devonshire. The carboniferous formation, in which these mines are worked, affords about two-thirds of the lead raised annually in the United Kingdom. It consists of alternating beds of limestone, grit, and shale, the ore being usually derived from the veins traversing the limestone, but in these mines principally from the beds of grit. The veins are numerous, but generally small, and not very productive: at the depth of seventy-six fathoms is a bed of shale, now being worked: below, the veins are expected to be more valuable. The veins are nearly all what are termed "*fault veins*"—that is to say, they are accompanied by a displacement of the strata, the subsidence being generally on that side to which the veins incline. The under clay is much greater in the argillaceous beds than in the grit or limestone. The general matrix of the veins is calcareous or fluor spar, barytes, and occasionally calamine, with fragments of the containing rocks.

'On the Palæozoic Rocks of Scandinavia and Russia, particularly as to their Base, or the Lower Silurian Rocks,' by R. I. Murchison.—The author first gave a general view of the palæozoic succession of Russia; showing that, however perfect in exhibiting a succession of Silurian, Devonian, carboniferous, and Permian rocks, it was defective in its base, inasmuch as, between the lower Silurian rocks of the government of St. Petersburgh and Reval, and the crystalline rocks of Finland, there occurs a wide and deep bay of the sea. Again, in tracing the lower edge of the Silurian rocks from St. Petersburgh to the north-east, their junction with the masses which preceded them is not to be defined, owing to large accumulations of detritus. A third obstacle to the determination of the order of succession, is the circumstance that, in trending to the north-east, the Silurian rocks, which in the Baltic provinces are soft, unaltered deposits, come into contact with eruptive greenstones, trap, &c., and undergo a metamorphosis over a considerable breadth of country, and thus the exact manner in which these early depositary strata repose upon any pre-existing rocks is very difficult to discover. Scandinavia, on the contrary, presents a very clearly defined base line, exposed in different sections both in Sweden and Norway. The very lowest Silurian beds, charged only with Fucoids, rest in horizontal masses upon the highly inclined and crystalline rocks of an earlier period, and at certain localities are, to a great extent, formed out of their detritus. In these first-formed crystalline deposits no traces of organic remains can be discovered, nor indeed in the very largely developed lower part of the series, as exposed in the British Isles, have any fossils been observed besides those of lower Silurian type. This condition, which is general as far as Europe, Russia, and America are concerned, combined with the prevailing theory that the first solid envelope of the globe was accumulated under such intense heat as to preclude the existence of animal life, induced Mr. Murchison to propose that this lowest group of rocks may be termed "*Azoic*," in reference to the palæozoic series by which it is succeeded, simply to express that no organic remains have yet been discovered in it. Believing that metamorphism has frequently imparted a crystalline character to sedimentary strata containing organic remains, as stated by Prof. Forchhammer, the author deemed it essential to draw the most marked distinction between this more modern class of crystalline rocks, and that which he terms "Azoic." In Norway there are large transition territories replete with granite, porphyry, and greenstone, erupted *posterior* to the Silurian deposits, and producing altered rocks, that are, however, distinguishable from the ancient gneiss, &c. upon which they repose. Illustrating his views by a general section across Sweden and the Baltic Sea, to the tracts of Russia east and south of St. Petersburgh, Mr. Murchison explained how the lower Silurian rocks of both countries contained a similar group of organic remains, including many species well known in the deposits of the same age in the British Isles. In Sweden—at least, in all its central and southern provinces—as well as in the Baltic governments of Russia, no true upper Silurian rocks are found. The whole of these highly fossiliferous regions belong to that early period in which not even the lowest orders of vertebrated animals lived,—a circumstance which assigns to them a truly "protozoic" character. The fact of the existence of marine vegetables alone, in the lowest of these rocks, and their co-existence with the earliest traces of the remains of animals, sustains that law of the economy of nature, from which it might have necessarily been inferred that large classes of animals could not have lived without vegetable sustenance. Mr. Murchison explains the absence of the upper Silurian rocks from southern and central Sweden, and from the Baltic governments of Russia, by the hypothesis that these regions had been previously elevated beyond the influence of depositary action; a view which is rendered probable by the occurrence of these rocks in the Baltic islands of Gothland, Osel and Dago, which are made up of corals and mollusks, similar to those of our Wenlock and Ludlow formation; the whole reposing on a band of limestone with Pentameri (Gypidium of Hisinger) occupying the place of the Woolhope and Horderley limestone of the Silurian system. Beneath it are black schists, sandstones, &c., containing Trinuclei, Asaphi, and Agnosti, Sphæronites, Orthidæ, and certain chambered shells, constituting

a group like that which characterizes the rocks of the same age in the British Isles. In the territory around Christiania, and in the islands of the Fion, these two divisions of the Silurian system are beautifully exposed in numerous undulations and dislocations of the strata, and they are there so bound together by zoological and mineral transitions, that they constitute one very distinct natural group, in which the coralline masses of the upper division are analogous to those of Dudley and Wenlock, the best developed types in England, and, like them, are surmounted by flag-like strata. Mr. Murchison then briefly alluded to a discovery which he made at Christiania, of an ascending succession, in which the upper Silurian strata are seen to pass under great escarpments of red flagstone, sandstone, and conglomerate, which, pierced and covered by porphyry, occupies a considerable breadth of high land, and reposes as a great basin upon true upper Silurian rocks. In conclusion, Mr. Murchison gave a sketch of some of the great leading features of Russian palæozoic geology, showing that the Devonian rocks there occupy a space less than Great Britain —that, reposing upon Silurian rocks, and overlaid by true carboniferous limestone, they there contained the same group of fishes as in Scotland, and the same group of mollusks and corals as in the strata occupying the same horizon in Devonshire, the Boulonnais, and the Rhenish Provinces; that this Devonian system is the earliest storehouse of fishes, a few small species only having been discovered in the upper Silurian rocks; and the striking distinction between these Devonian ichthyolites and those forms which succeeded them in posterior epochs has been amply sustained by Agassiz. The coincidence between the organic remains of the carboniferous limestone of Russia and that of the British Isles, and the perfect agreement between numberless species of shells found in the Yorkshire dales on the one hand, and in tracts of Siberia on the other, was adverted to as a strong proof, in addition to that derived from the wide spread of the same fossil coal-plants, that in these early epochs there prevailed much more equable and widely-diffused climatal conditions than at the present day. And lastly, Mr. Murchison summed up the views of M. de Verneuil and Count Keyserling, his coadjutors, and himself, by explaining that the Permian strata (so named from occupying a region more than twice as large as France around the ancient kingdom of Permia) were connected with the lower palæozoic deposits by containing many organic forms belonging to the same families and genera, though for the most part specifically distinct. The land plants of this system approached very nearly to those of the carboniferous epoch, and M. Adolphe Bronguiart had often found a difficulty in separating them. This Permian system comprehended the formation of the lower new sandstone (*Rohte todte liegende*), magnesian limestone (*Kupfer schiefer et Zechstein*), and also some overlying red sandstone, which has been hitherto grouped with the Trias. The termination of the Permian system is marked by an *entire change* in animal, and, as far as we yet know, vegetable life; for the fossils of the red marls, *Muschelkalk* and *Keuper* (new red of English geologists), are wholly distinct from those of the palæozoic series. Mr. Murchison laid upon the table copies of a tabular list of all the organic remains of the Permian system, as prepared by M. de Verneuil and himself, and forming part of a work about to be published on the geology of Russia. He also called attention to a lithological map of Sweden, now in preparation, in which a great number of the ancient crystalline rocks would be distinguished from each other by separate colours, and all their flexures marked upon the map. A portion of this map was exhibited to him by Baron Berzelius, under whose superintendence it will be published; and he alluded to the geological map of the Christiania district, by Prof. Keilhau, and announced a new geological map of the northern part of Norway.

Mr. Sedgwick objected to the application of the term *Lower Silurian* to all the oldest fossiliferous rocks; the separation of the Llandeilo flags and Caradoc sandstone from the old rocks of North Wales had originated in a mistake: some general appellation was yet needed for them, such as European geologists would accept.

Mr. Murchison read a portion of Dr. Forchhammer's paper 'On the conversion of Fucoid Shale into Gneiss.'—[Read in the Chemical Section.]

'On the Fish River of the Polar Sea,' by R. King, M.D.—Dr. King states that the Fish River was crossed at its source by Hearne, during his memorable journey which led to the discovery of the Polar Sea. It was proposed, in 1833, to reach the wreck of the *Fury*, in search of Captain Ross and his party, by this stream, and the whole plan is recorded in the Geographical Society's Journal, vol. 3; but a hitherto unknown river, lying to the westward, and running parallel with it to the Polar Sea, was ultimately the route of the explorator's party; and thus the course and outlet of the Fish River is still a problem. Captain Sir John Franklin had not made up his mind when the river and its trendings was under anxious consideration in 1833, but by a written communication in 1836 he expressed his disbelief in the flowing of the river to the Polar Sea: the debouch he fixed between the Chesterfield and Wager inlets. Dr. King produced evidence in support of the course assigned to this river in the Geographical Society's Journal as to its falling into the Polar Sea; and then expressed his opinion that it would form a prominent feature in all further attempts to survey the unexplored Polar lands: that it was the high road by which to connect the discoveries of Dease and Simpson on one side with those of Captain Parry on the other, which would complete our knowledge of the coast of northern America. In conclusion, he observed, "that although to fix the boundaries of the Polar Sea ages have been required, the prosecution of the survey has led to adventures so fruitful in incident and so instructive in character, that we are able to recur again and again to the subject; and shall we now stop, when one season, one short summer, is all that is required to complete the labour of three centuries?"

Mr. David Williams read a paper 'On the Exeter Amygdaloid, in connexion with some Theoretical Views respecting the Metamorphism of Rocks.'

WEDNESDAY.

'On the discovery of Gold Ores in Merionethshire,' by A. Dean, C.E.—The author states that the Cwmheisian Mines, near Dolgelly, which have yielded as much as seven ounces of fine gold per ton of ore, form part of a regular system of auriferous veins which occur throughout the whole of Snowdonia, in a group of strata, remarkable for the repeated alternations of igneous and sedimentary deposits, which are occasionally traversed by dykes or elvans and mineral veins. The first series of mineral veins are quartzose, and contain ores of argentiferous galena, copper, blende, &c.; their prevailing direction is S.E. and N.W., and they usually dip to the N. The second series always intersect the first, and are generally filled with carbonates of lime and barytes, with galena and blende ores; their general bearing is N.E. and S.W., with a dip to the N. The veins of the third or auriferous series, traverse both the other sets; they are usually but from one-eighth of an inch to six inches wide, but sometimes as much as two or three yards; they are occasionally filled with indurated clay, at other times with oxides of iron, iron pyrites, decomposed blende, &c. The gold is found chiefly where these veins intersect those of the first series; it forms a coating on the spar, and also occurs as interlacing fibres. The veins traversed by the gold veins are also enriched by them on the south side of the intersection, but never on the north side, and this only takes place at all where the dip is to the north. The gold veins are very numerous, occurring singly, or in considerable numbers, within a few feet of each other; if a lead ore is productive at its intersection with the gold veins, as at the E. Cwmheisian mines, it sometimes produces two to twenty ounces of gold per ton of washed ore; some ores yield twelve or fourteen ounces of gold per ton as broken. In this mine are ten quartzose argentiferous lead veins of the first series; these are crossed by numerous auriferous veins or joints, one inch to one-eighth in width; and as it would be impossible to work them by themselves, and the other veins are very productive of lead, the whole body of the lodes is broken down in a crushing mill, and the gold washed with the lead ore. At the Berthllwyd and other mines, the produce of the auriferous veins was found to be fifty-nine ounces five dwts. per ton of ore, and of silver sixteen ounces fifteen dwts. per ton. The average produce of the gold ore in Siberia, the Ural Mountains, and South America, seldom amounts to one ounce of fine gold per ton of ore, and even four dwts. is considered a workable quantity. The author considers that numerous gold veins exist in Merionethshire, and that a considerable amount of gold will be obtained when the character of the ore is better understood.

Mr. Batten read a summary of the Phenomena of Glaciers, and invited a discussion on the application of their agency to the explanation of certain geological phenomena.—Prof. J. Forbes observed that in Switzerland there was no question of a formerly greater extension of the glaciers, by which boulders and gravel had been carried from the Alps across the plain of Switzerland to the Jura; but there was great difficulty in applying this theory to other countries. It had been ascertained that an angle of three degrees on the surface was sufficient for the motion of glaciers; if more extended, they would move at a still smaller inclination, and this would require a temperature but a few degrees lower than the present average. The motion of a river presented considerable analogy to that of a glacier; a river twice as wide and deep as another, and consequently containing four times the mass of water, would move as fast as the other, at half its inclination. He considered a glacier as a viscous rather than a solid mass, being broken up by capillary fissures filled with water.—Mr. Leonard Horner remarked that the glaciers of the Alps would have to cross a plain forty miles wide, and ascend the Jura 800 feet to carry the boulders to their present position.—Mr. Murchison contended that it was impossible to admit the agency of glaciers in the distribution of gravel and erratic boulders, except in the neighbourhood of certain great elevated centres. In the Alps this was unquestionably the case; but the same agency could not be applied to the great masses of drift spread over England and all the northern half of Europe—drift of northern origin, derived from primary rocks, and resting on secondary and tertiary formations; the great magnitude of the individual blocks, and their distribution over wide plains, would be far better accounted for by the agency of floating icebergs. The innumerable islands of the Baltic all presented a rounded outline to the north, and were worn and striated like the *roches moutonnées* of the Alps, whilst their southern sides were rugged and precipitous; this, Mr. Murchison considered was due to the drifting of gravel and boulders from the north.—Mr. Sedgwick referred to the observations of Sir James Hall, on the water-worn rocks in the great Caledonian trough; and suggested that sudden elevation of the land would produce waves sufficient for the transport of gravel, which could not be accounted for either by glaciers or ice-rafts.—Mr. Oldham stated, that in the county of Kerry, and many other parts of Ireland, the rocks appeared worn and striated, especially when the turf or superficial deposits were removed; in some places these rocks were covered by a marine clay with shells (*Nucula oblonga, Astarte Gairensis, Turritella terebra, Tellina solidula*, &c.) which could not have been formed by terrestrial glaciers. He also exhibited a map of Ireland, showing that when these clays were formed, the whole island was covered by the sea, the tops of the highest mountains alone appearing as a group of small islands.

TUESDAY.

SECTION D.—ZOOLOGY AND BOTANY.

Mr. Thompson read a paper, entitled 'Additions to the Fauna of Ireland,' comprising a number of new species of Invertebrata; specimens of which were exhibited.

Mr. Thompson read 'Descriptions of Pterochilus, a new genus of Nudibranchiate Mollusca, and two new species of Doris, by I. Alder and A. Hancocks;' who likewise sent for exhibition drawings of the following four species, described by them since the last meeting, viz., *Proctonotus mucroniferus, Eolis alba, E. Farrani*, and *E. violacea*.

'On the Morphology of the Reproductive System

of Sertularian Zoophytes, and its Analogy with that of Flowering Plants,' by Prof. E. Forbes.—At certain periods in the life of the sertularian zoophytes, which are composite beings of plant-like forms, constituted of numerous *nutritive* individuals which, besides the life of each share in the common life of the whole, there appears on the axis or branches variously formed bodies, in some species urn-shaped, in others pod-shaped, very dissimilar from the other parts of the whole, in which, after a time, the ova are formed. These are the ovigerous vesicles of naturalists, the true nature of which has been often discussed, but hitherto unexplained. These bodies, Prof. E. Forbes maintains, are branches of many individuals which have undergone an *ideal* metamorphosis, exactly comparable to that which Linnæus first, and Goethe afterwards, demonstrated in the flowers of vegetables. He states his theory of their nature thus:—The vesicle is formed from a branch or pinna, through an arrest of individual developement, by a shortening of the spiral axis, and by a transformation of the stomachs (individuals) into egg-producing membranes, the dermato-skeletons (or cells) uniting to form the protecting capsule or germen: which metamorphosis is exactly comparable to that which we find in the reproductive organs of flowering plants in which the floral bud (normally a branch clothed with spirally-arranged leaves—an assemblage of respiratory individuals) is constituted through the contractions of the axis and the whorling of the individuals borne on that axis, and by their transformation into the several parts of the flowers. In order to prove this theory, the author submits the several forms of ovigerous vesicle in the family of Sertulariadæ to a searching analysis, taking the pod-like vesicle of most *Plumulariæ*, usually regarded as the most complex, but in reality the simplest, as a type. He shows that all the classes of forms, six in number, may be explained by means of his proposed view of their nature, which is further borne out by certain monstrosities which have occasionally occurred among the zoophytes. Having, as he conceives, proved his position, he proceeds to show its application to systematic zoophytology, urging the dismemberment of the genera *Sertularia* and *Plumularia*, the separation of the Sertulariadæ from the Hydraidæ and Tubulariadæ, as an order equal in value to these families united, and the arrangement of the zoophytes, under four orders of which the above-named families form two, and the Helianthoid and Asteroid polypes the other two, the Bryozoa being transferred to the Mollusca, where they should form a family parallel and equal to the compound Tunicata.

Prof. Owen regarded this paper as a beautiful application of the principles of transcendental anatomy. The idea of morphological change could not be derived from inductive science alone. It was something different from induction, and hence, as it were, became a new handle for science. The idea of resemblance as a guide in our researches had been applied with great success in the study of vertebrate animals, and the great invertebrate kingdom of animals was now made to connect the vegetable kingdom, and the higher forms of vertebrate animals by the same great laws of morphological change. By the application of this principle the apparently confused details supplied by our countryman Ellis, on the corallines were reduced to order. He hoped that the successful application of the idea in this case would lead to still further results in the same division of the animal kingdom.—Dr. Latham stated, that if the philosophy of transcendentalism was worth anything at all, it was of equal application in the animal and vegetable kingdom. It was founded on the idea of symmetry; and he had full faith in such a method; but caution was required in applying a definite law in one kingdom to another, because there is an essential *difference* between an animal and a vegetable. The whole plant could not be regarded as an individual, although this was truly the case in many of the higher animals. The leaf alone was an individual. We must, therefore, in these researches, pursue the inquiry down to the reproductive cells, and from that point trace the laws which influence the form and shape and functions of the parts which are subsequently developed from it.—Dr. W. B. Carpenter believed that Prof. Forbes had applied a legitimate principle of analysis to the zoophytes. He could but point out the analogy between the capsule of Campanularia and the thecæ of mosses. Mr. Quekett had recorded an instance of a metamorphosed theca in a moss, which confirmed the theoretical view of its structure. Abnormal formations in the family of zoophytes would probably soon be found, that would confirm Prof. Forbes's views. He agreed with Prof. Latham in the necessity of combining the study of histology with morphology, in order to develope more accurately the relations of the animal and vegetable kingdom.

Dr. W. B. Carpenter read a Report on the Microscopic Structure of Shells.—These researches are still in progress, and the present Report embraced an account of the examination of the shells of several species of Mollusca, Echinodermata, and Crustacea.

Mr. Goadby exhibited a series of preparations of animal bodies preserved in glass cases, according to a method of his own suggestion. Many gentlemen having complained that they had not succeeded in preparing animal substances in the way which he recommended, he was desirous of stating fully the plans which he pursued. The following were the formulæ for all the solutions he used:—

A. 1.

| | |
|---|---|
| Bay salt | 4 oz. |
| Alum | 2 ,, |
| Corrosive sublimate | 2 grains. |
| Water | 1 quart. |

A. 2.

| | |
|---|---|
| Bay salt | 4 oz. |
| Alum | 2 ,, |
| Corrosive sublimate | 4 grains. |
| Water | 2 quarts. |

B.

| | |
|---|---|
| Bay salt | ½ lb. |
| Corrosive sublimate | 2 grains. |
| Water | 1 quart. |

BB.

| | |
|---|---|
| Bay salt | ½ lb. |
| Arsenious acid (or white oxide of arsenic) | 20 grains. |
| Boiling water | 1 quart. |

C.

| | |
|---|---|
| Bay salt | ½ lb. |
| Arsenious acid | 20 grains. |
| Corrosive sublimate | 2 grains. |
| Boiling water | 1 quart. |

The first, A. 1., was the ordinary solution he used. A. 2., where there was a tendency to mouldiness, and the animal texture was tender, as, although salt preserved animal matters, it sometimes destroyed the tissue. B. was used in cases where animals contained carbonate of lime, as, in these cases, alum produced decomposition. For old preparations, arsenic was substituted for corrosive sublimate, as in BB, but where there was a tendency to too much softening, the corrosive sublimate should be added, as in C.

Prof. Owen stated that these solutions were better than alcohol for the preservation of nervous matter. In the course of his remarks he called attention to the dissections of the invertebrate animals made by Mr. Goadby, many of which are at present in the museum of the College of Surgeons.

Prof. Owen then read a paper 'On the Structure and habits of the Argonaut,' from Madame Power.—A full report of Madame Power's labours will be found in the *Athenæum*, No. 590.

The Secretary read a paper from Dr. Thomas Laycock, entitled 'Observations on Periodicity, as observed in the Functions of the Animal Kingdom.'—The paper referred to many of the periodical phenomena occurring in the animal kingdom, and recommended the adoption of some system by the Association, by which such phenomena might be recorded and collected together for the purpose of deducing general laws.

Dr. Lankester stated that a Committee for this purpose had been formed, to report at the next meeting.

Mr. T. West read a paper 'On the occurrence of Sclerotic Plates in Fishes.'—These plates had been noticed in birds, but not, that the author was aware, in fishes. They did not occur in all fishes, but the author suggested that they might be a provision to enable fishes to swim in fleet water.

Mr. Peach had seen these plates in fishes swimming in both fleet and deep water.—Mr. Allis had found them constantly in birds. They occurred in lizards, but not in snakes.

The Chevalier Schomburgk read a paper 'On the Forest Trees of British Guiana, and their use in Civil and Naval Architecture.'—This paper was illustrated by a great number of polished specimens, and some of them possessed extraordinary beauty of marking. The author also exhibited a specimen of the trunk of the *Aspidosperma excelsum*, which grows in the form of a fluted column; and drew attention to the nest of the Rock Manakin, or Cock of the Rock (*Rupicola elegans*); and to the head of the largest freshwater fish known, the *Sudis gigas* of Cuvier, both of which he had brought from Guiana.

WEDNESDAY.

Many elaborate papers were discussed. One of these was a valuable report 'On the Structure and Functions of the Aranedæ,' by Mr. Blackwall.

Prof. Owen read an abstract of Prof. Agassiz's report 'On the Fossil Fishes of the London Clay.'

Prof. Owen exhibited a human skull, from South Australia, which had been used for the purpose of carrying water, in fact as a widow's cruise. The absence of the art of pottery was the inducement for thus using this part of the human skeleton. The ancients, at their feasts, were said to quaff their wine from the skulls of their enemies, but he believed this was the first case in which it had been ascertained that any part of the human skeleton had been used as a domestic utensil.

The Ethnological Sub-Section not having met this day, the members of that Section took this opportunity of raising a discussion upon the characters and distribution of the tribe to which this skull belonged.

Mr. Peach made a short communication on the natural history of Goran in Cornwall.

Mr. H. Goodsir read a paper 'On the Structure and Developement of the Cystic Entozoa.'

Mr. Ball noticed the peculiar structure of the hoof of the Giraffe, which pre-eminently fits it for passing along mountain ravines with velocity. This structure consists in a brush-like structure of the sole of the foot.

---

D.—Sub-Section, ETHNOLOGY

FRIDAY.

The Ethnologists, this year, formed a Sub-Section in connexion with Section D; the amount of business in the Section itself leaving no time to receive their communications: the consideration of which, in the Sub-Section, commenced on Friday. We have delayed our notice, until we could report the whole.

'On the Natives of the Hawaiian Islands,' by the Rev. W. Richards.—They have no clear tradition of their origin, but they sometimes speak of their ancestors having come from Tahiti. The similarity of the Hawaiian language with that of all the islands in the Pacific east of the Friendly Islands, including New Zealand on the south, and several islands on the west, prove that their inhabitants must have had a common origin. The question, therefore, presents itself,—In what direction did the tide of population move? If the Sandwich Islands were first settled, then they must have been settled from America on the east, or from Japan on the west. The distance from either quarter offers no insuperable objections; for several Japanese junks have drifted on the Sandwich Islands, and the same winds which bring drift wood from America might also have brought boats. But the dissimilarity between the language, habits, and religion of the Hawaiians, and the Japanese or Americans, amounts to almost positive evidence that the inhabitants of Hawaii could not have derived their origin from them; while, on the other hand, the author knew of no facts whatever which favour the idea of such an origin. There are, however, many facts which favour the idea of their having come from the south and west.

'On the Dog as the Associate of Man,' by Dr. Hodgkin.—The object was to illustrate the principle that the inferior animals which have accompanied man in his diffusion over the globe may be advantageously studied, with the object of obtaining some light on the subject of the affinities of the families of mankind. The dog was selected not merely on account of his almost universal presence, but also from his tolerance of almost every climate, whilst he is susceptible of many modifications which attest

the influences to which he has been exposed, and which are worthy of observation in relation to the changes which man himself may undergo. To avoid unnecessary complication, the author excluded from consideration the Dingo and its varieties, as found in Australia and the islands of the Pacific, and also the wild dogs of Mexico, although they appear to have furnished the Indians with some domestic animals. He likewise passed over many varieties, and the group of mongrels, and proceeded to notice the principal types. The first and most strongly-marked, and so spread that it may be traced, with such modifications of colour and size as do not conceal the resemblance, from China to Kamtschatka, Siberia, the North of Europe, where it is known as the Spitz or Pomeranian Dog, to Iceland and the regions visited by the Esquimaux. The second, comprising all the true hunting dogs endowed with the sense of smell, having the strongest marks of human cultivation, and being dependent on man. These dogs are the bloodhound, stag, fox, and hare hounds, pointers, and, perhaps, some of the terriers. They seem to belong to the south-west of Asia, and the south of Europe, and to ancient Egypt. The third are the strong but active dogs, of which the earliest type is seen in the ancient sculptures of hunts, in which the game was the wild boar, the bull, the stag, &c. On the correctness of making but one group of these dogs the author is not confident; but some animals, apparently distinct at first sight, are found to belong to it, and to be nearly related: such are the greyhound, the bull-dog, the kangaroo-dog, the mastiff, Dane, Dalmatian, &c. The clashing of the tokens of affinity and the technical characteristics of artificial classification was noticed, and some generalities regarding the probable productions of a few established varieties were suggested. The Newfoundland dog was referred to the union of the Esquimaux dog with the *chien dogue* of the French, which, if the conjecture be true, is not without interest and plausibility with regard to the ethnology of that island.

SATURDAY.

'On the African Languages,' by Prof. LATHAM.—The languages of Africa are reducible to five classes; meaning by the word *Class* a group containing languages as dissimilar as the English and Latin, the German and Sclavonic, the modern Greek and Portuguese: in other words, a group equivalent to the groups expressed by the term Indo-European.—1. Of these, the first was the Egyptian or Coptic group, containing the three extinct dialects of Egypt.—2. The second, the Berber group, containing the *non*-Arabic tongues of Fezzan, Tripoli, Tunis, Algiers, and Morocco, together with the extinct Guanche language of the Canary Isles. The Tuarick language is also Berber. The Tibboo had been made Berber upon insufficient grounds.—3. The Caffrarian group, containing nearly all the languages south of the line, with the exception of those belonging to the—4th, or Hottentot group.—5. The remaining tongues were reducible to certain primary divisions, which altogether constitute a group equivalent to the Indo-European. It was stated that these classifications, in the present state of our knowledge, were provisional. Of these there were, —*a*, the Nubian languages, of Nubia, Kordofan, and Darfur; these included the Fistil, Schabun, Takeli, Koldagi, and other vocabularies of Rüppell, the Jebel Nubah of Holroyd, the Tacazze and Darmetchegan Shangalla of Salt, and the Quamamyl of Caillaud; *b*, the Galla and Danakil languages of Sheho, Arkeeko, Hurner, Adaiel, Abyssinia, Shoa, &c., &c.; *c*, the Borgho; *d*, the Bornai; *e*, the Begharmeh languages; *f*, the Howssa languages, including the Timbuctoo vocabularies of Denham, Adams, and Caillie, along with several of Bowdich's numerals; *g*, the Holoff; *h*, the Mandingo languages: it was stated, in respect to this group, that the Bullom and Timmanee languages were akin to each other and Mandingo; *i*, the Foulah languages; *j*, the Ibo-Ashantee group: this contains the following subdivisions;—the Acra, the Ashantee, the Dahomey, the Ibo, the Nufi, and Jomba tongues: besides these and Usnow, the isolated, unplaced, and fragmentary vocabularies of Adelung were Ibo-Ashantee. The Agow and some other tongues were left unplaced. A discussion arose as to the place of the Berber tongues, Dr. PRITCHARD expressing his assent to the doctrines of Mr. Newman, who made them Semitic. To this Dr. LATHAM demurred. He indicated also certain grammatical affinities between the Galla and Coptic.

'On the Sandwich Islanders,' by Gen. MILLER.

A paper by Mr. H. R. SCHOOLCRAFT was next read.—It is admitted by philologists, that there are, at least, three generic languages, differing in their essential character, in that part of North America which lies between the Atlantic coast, the original seat of settlement, and the Mississippi River, extending into British America. Mr. Schoolcraft confined himself to that generic branch of its aboriginal Atlantides, to whom the term Algic has been applied. This term embraces a number of languages, sub-languages, and dialects, comprehending the native population of the principal part of the Atlantic coast of the United States, the Ohio and Mississippi valleys, the Valley of the St. Lawrence, the great chain of interior lakes, and extending far into the Canadas and Hudson's Bay. The Algic language is transpositive, accretive, and highly compound, the constant tendency on the mind of the speaker being, to express, along with the original idea, all its adjuncts and qualifications. Hence properties as well as things—the object acted on as well as the actor—position as well as number, are constantly associated in the sentences and words, which are uttered with a sententious formality. The tribes do not understand each other after a few removes of dialect. The Algic language is regarded as the most copious and harmonious tongue spoken by the North American tribes.

MONDAY.

Dr. HODGKIN read a Report of the Committee appointed to continue researches 'On the Varieties of the Human Race,' from which it appeared that the arranged set of queries had been extensively circulated. That they had not merely been forwarded to every quarter, but that they had been accompanied by appeals in support of the subject. It alluded to the increased attention now paid to Ethnology in France, Germany, and the United States, and announced the establishment of the Ethnological Society of London, which it was hoped would co-operate with the British Association in procuring the preservation of numerous facts regarding the history of the human race, which are now in great danger of being lost in oblivion.

'On the Natives of Guiana,' by Chevalier SCHOMBURGK.—It was illustrated by a Macusi youth in his native dress, by several casts of natives met with on his late journey, as well as by several skulls, and by a series of drawings by Mr. Goodall. In 1840 Chevalier Schomburgk estimated the tribes who inhabit the British territory at 7,000, but they have since been reduced by small pox to 6,000, but a small population for an area of 100,000 square miles. "It is scarcely necessary to observe," said Chevalier Schomburgk, "that a subject so replete with interest as the present state of the aboriginal inhabitants of Guiana deserves more attention than Great Britain has hitherto afforded it. The history of this people appear to be the end of a tragical drama, for a whole race of men is fast wasting away."

'On the Southern Limits of the Esquimaux Language,' by Prof. LATHAM.—According to Prof. Latham the line of demarcation between the Esquimaux and the American Indian, was too trenchant. The Ugalyatmutri of Resanoff, near Mount St. Elias, could be shown to be Esquimaux by comparing their tongue with the language of Oonalashka, Kadiack, Kenay, and Sitca, *en masse*. The Chipewyan of Mackenzie and Dobbs was also akin to the Esquimaux.

TUESDAY.

'On the Supposed Extinct Inhabitants of Newfoundland,' by Dr. KING.—Instead of being red men, as has been supposed, Dr. King produced the evidence of Thorsin, the Icelander of the tenth century, Whitbourne, who wrote in 1612, the Abbé Raynal, Lieut. Roger Curtis, and O'Reilly, in support of their being Esquimaux, and expressed his opinion, that Newfoundland was never permanently occupied, but merely formed one of their fishing stations. Dr. King observed, that while we have sought for the living inhabitants, we have neglected that which remains of the dead; and that future research would, in all probability, disclose that the Newfoundlanders were Esquimaux, which was the result of the opening of the tumuli at the falls of Niagara.

'On the Shyens and Karens of India,' by Mr. KINCAID.—There are about eight millions of Shyens; they all speak the same language, and have the same written character. It is mono-syllabic, and partakes largely of nasal sounds. Their alphabet is an improvement on the Burman, as it adopts only the useful consonants. They have twelve vowels which are rarely used; certain points or marks are attached to the consonants to make the vowel sounds. Their alphabet, in form, hardly varies from the Burman. The Kakhyens, Thing-bau Kakhyens, Karens, and Karen-nees, are only so many different names. They are scattered over a vast extent of country, and number about five millions. The account given by Marco Polo, agrees with that furnished to Mr. Kincaid by the Shyens.

The next paper read was by Mr. W. B. BRENT. It related to the stature and relative proportions of man, at different epochs, and in different countries. It embodied in tables the results of the measurement of some thousands of individuals, obtained from a variety of sources, though chiefly by the labour of the author, who suggested that statistical returns might be obtained in connexion with the census. He rejects the idea that tall men are deficient in mind, as hinted by Lord Bacon, and adduced instances of the contrary, and noticed the fact that the stature of the inmates of hospitals, workhouses, and prisons, is below the average. The average height of Englishmen is placed at 5 feet 7½ inches. The army returns range from 5 feet 6 inches to 5 feet 7 inches. The yeomanry, including a higher class, range from 5 feet 1 inch, to 6 feet 2 inches. The French conscripts, officially stated, give an average of 5 feet 4⅝ inches, but Mr. Brent, from his own observation, would place it higher. The observation made by Prof. J. D. FORBES amongst the pupils of his own class, placed the Irish as the tallest, the Scotch next, and then the English. The Belgians appear to be of still lower stature. A fact was noticed, as having been brought to light by the researches made by Mr. Hutchinson, in which Mr. Brent had taken a part:—it was discovered that the amount of air which can be expelled from a healthy chest, after full inspiration, bore a certain ratio to the height of the individual, a certain number of cubic inches of air corresponding to every additional inch of stature. A portion of the paper related to the relative proportions of antique statues; these the author has reduced to a common measure, and not content with various measurements, he has ascertained what would be their absolute weight, as men, at different statures. These results he has compared with the measurement and weights of a large number of the athletæ of the present age, boxers, wrestlers, &c. as well as with those of picked men in the army and aristocracy.

'On the Eastern limits of the Australian Race;' and 'On the Inhabitants of the Garrow Hills,' by Prof. LATHAM.—After explaining the distribution of the black Asiatic races, Prof. Latham stated that the particular race of Australia and Van Diemen's Land were to be found in the islands of Ombay, Floris, and Surabawa. He did this on the strength of three vocabularies hitherto unplaced: 1st, the Ombay of Arago; this was akin to the Australian and Tasmanian; 2nd, the Teonbora of Sir S. Raffles; and, 3rd, the Mangarei of Marsden. Of the inhabitants of the Garrow Hills, Prof. Latham states these were a race, more or less black, on the northern frontier of India. From a vocabulary of their language they could be shown to be unconnected with true insular Asiatic Blacks, and akin to the Tibetian races of Thibet and Bootan.

'On the Stature of the Guanches, the extinct Inhabitants of the Canary Islands,' by Dr. HODGKIN.—It is known that, prior to the discovery of the Canary Islands by the Spaniards, these islands were inhabited by a race of men of which not only many particulars are recorded, but individual remains themselves are preserved in their mummies. By many of the historians who have written of these people, either from observation, or so soon after the conquest that authentic information must have been accessible to them, the Guanches are described as

remarkable for their stature, their agility, and their strength. Dr. Prichard, in his work, has, in speaking of the Guanches, adopted this description, and Sabin Berthelot, in the Transactions of the Ethnological Society of Paris, has mentioned authorities and quoted passages which describe the ancient inhabitants of the Canaries as possessing the qualities just mentioned. The casual observation of Guanche mummies had given Dr. Hodgkin so different an impression regarding the stature of this race, that his surprise was excited by these relations, and he was induced to make inquiries, by correspondence with his friends in the Canary Islands, and by accurate investigation of the remains preserved in European collections. The measurements of eight or nine individuals, males and females, of whom the skeletons are wholly or in part preserved, range from 4 feet 6½ inches to 4 feet 10¾ inches, which exhibits a diminutive stature even for the tallest. Dr. Hodgkin does not presume to infer, from these facts, that the statements alluded to are erroneous, but he conjectures that the Canary Islands, like many other parts, may at different periods have been inhabited by people of different races. The people found by the first Europeans appear to have been of the same family with the Berbers of Africa, as indicated by language, physical character, &c. They possessed, however, some characters which distinguish them from the Berbers,—such as the making of mummies, and other customs. The author suggested the investigation of all accessible relics of the ancient inhabitants—the comparison of the Guanche and Berber languages, in order to detect in the former, words distinct from the latter—and a minute reference to original writers, as affording the possible clues by which this ethnological difficulty may be overcome.

'On Ethno-epo-graphy,' by the Rev. Thomas Myers.—His object was, to furnish travellers among hitherto unknown tribes with a correct method of expressing the sounds which they hear, and forming vocabularies on the intelligible principle of using a distinct character for every sound. He used a modification of the common Roman characters, and showed how his system applied to the Arabic and Hindoo families of languages. He referred to the schemes of other orthoepists.

The Sub-Section then concluded with a short notice 'On the Mode of Constructing Ethnographical Maps,' by Dr. Kombst.

TUESDAY.

Section E.—MEDICAL SCIENCE.

'On the Functions of the Bile,' by Dr. Kemp.—The author, after alluding to the experiments of Berzelius, by which it was proved that the bile was only in a slight degree excrementitious, concluded that it was not absorbed with the chyle *without undergoing change* from the nature of the fluid found in the thoracic duct; the object of the paper was to suggest a theoretical solution of the question of the action of the bile (chemically) on the chyme, in order to produce the chyle suitable for absorption.

'On the Scientific Cranioscopy of Prof. Carus,' by Dr. Thurnam.

'Report on the Physiological Actions of Medicines,' by Dr. J. Blake, in which the author endeavoured to prove and illustrate the law suggested in a former Report [*Athen.* No. 829] by additional experiments; namely, "that isomorphous substances, when introduced directly into the blood, exert an analogous influence on the animal economy." The substances experimented with were the tartrate of antimony, which produced (when injected into the veins) exactly the same phenomena as did the arsenic or phosphoric acid, as detailed in former reports; the salts of platinum and palladium, the action of which was identical. The last series of isomorphous substances was the well defined group, the chloric, hydrochloric, bromic, and iodic acids; the effects of these were closely analogous, namely, the arrest of the circulation in the lungs, the animal dying from congestion, and serous effusion in the respiratory organs. When the injection was into the venous system, and when into the arteries, the circulation was irregularly depressed and elevated at intervals, as evidenced by the hæmadynamometer. From the evidence of former groups of experiments, united with those detailed in this Report, the author deems the law referred to proved, and the conclusion warranted, that the molecular reactions that take place between the elements of living beings and inorganic bodies are to a great extent independent of chemical affinity, but connected with those properties of matter expressed by its isomorphous relations, or by its physical polarity. The Report concluded with some ingenious theoretical considerations derived from the consideration of the general law above stated, requiring more extended inquiry.

Dr. Goldie proposed that the Report should be printed at length in the Transactions, as being of great importance, and opening a vast field for further experimental research; the results of which might materially modify doctrines of animal chemistry at present admitted, but scarcely proved.

TUESDAY.

Section F.—STATISTICS.

The Chairman, referring to the paper sent by Mrs. Davies Gilbert on the subject of Industrial Schools, read an extract from a letter addressed by H.R.H. the Duke of Kent, father of her present Majesty, to Dr. Hamel, and dated Oct. 11th, 1819. "Adverting to this principle of educating the poor (by mutual tuition in Dr. Bell's or Lancaster's schools,) I own, in my private opinion, there is one great *desideratum* yet, which is the erection of schools of industry upon a similar principle, and upon a system so economic, as they not only *can*, but always *should* go *pari passu* with the schools of instruction. If, through your pen, which has already done so much good in promoting the great cause of education, the serious attention of liberal and enlightened individuals could be called to this point, I am satisfied that it would be doing a still greater service than has yet been rendered to humanity; as it would insure to the poor man, *after* he has attained the benefits of education, that sensible and rational employment, arising out of his acquirements in the school of industry, that would give him bread—instead of inducing him to think himself, from the knowledge he has acquired, *above* work, which is one of the most plausible objections now made against the plan for educating the poor, of which you and I are such advocates."

Dr. Alison directed attention to the paper which he had read at the Glasgow meeting, [*Athen.* No. 674] on the system of the management of the poor in Scotland, and read copious extracts from the Reports of the Scottish Poor Law Commissioners, to support the views he had then advocated. As these reports have been long before the public, we deem it unnecessary to repeat Dr. Alison's extracts.

Part of a paper furnished by Dr. Clendinning 'On the Statistics of the Infirmary of Mary-le-bone,' was read, but the portion was too limited to make any general account of the nature and object of the communication intelligible or even possible.

Dr. Laycock directed attention to the printed Reports on the Sanitary Condition of Towns, and this gave rise to a conversational discussion among the few members present, not exceeding twelve, which was too desultory to be recorded.

Mr. Fletcher laid on the table the statistics of the Public Schools of York, and Mr. Haywood announced a further communication from Mrs. Davies Gilbert, on the subject of Agricultural Schools, but neither having been read, they cannot enter into the report of the Sectional proceedings.

WEDNESDAY.

The Committee met, and resolved, that it would tend to the elucidation of various important question in economical science, to have accurate statistics of mining and agriculture:

That the present registration of births and deaths is not sufficiently minute, nor sufficiently authenticated for scientific purposes; and, more especially, that the causes of death are too vaguely tested.

WEDNESDAY.

Section G.—MECHANICAL SCIENCE.

'On a plan for Preventing the Stealing of Letters by Letter Carriers,' by the Rev. F. O. Morris.—Mr. Morris proposes that the stamp (similar to the one at present in use) be imprinted on a slip of paper about half an inch wide and twice the length of a folded letter; the price a penny, as at present. Let this stamped slip be put through the letter' which may be done either before or after it is folded' and then be doubled inwards, so as for the ends to meet. It will keep in by the mere doubling down, but if additional security be thought desirable, these ends may be fastened together with a wafer, &c. Let this stamped slip be directed, as well as the letter itself, by the writer, and let it be stamped at the office where it is put in, as well as where it arrives, as also the letter itself, as is done with the latter at present. When such letters arrive at their destination, let the slips be pulled out, and filed, or those of each day put by themselves, for any fixed time, for reference if necessary. Detection would thus, on inquiry, immediately follow the detention of any letter.

Mr. J. G. Bodmer exhibited a variety of improved cutting tools. He also read a paper 'On a New Apparatus for Starting Heavy Machinery.' Upon the driving-shaft a bevel wheel is fixed at one end, and another is put on loose opposite to it, with a pinion between. To the latter is fixed another bevel wheel, which gears into a pinion which is connected with the shaft driving the machine to be started. By applying the break to the drum to which the centre of the intermediate pinion is fixed, the machine attached will be set in motion.

'On a New Furnace Grate,' by the same.—The peculiarity of the fire grates is, that the fire bars are made to travel from the fire-place or hopper towards the bridge, and return again to the place whence they started in the opposite direction. The object is to admit of the supply and combustion of the fuel being perfectly regulated according to circumstances, and to prevent the emission of smoke, by causing the gas generated from the green coal, at the time when the heat commences to act upon it, to pass over the whole surface of the ignited fuel before reaching the chimney.

Dr. Green gave a description of Nasmyth's steam pile-driver, which is constructed on a similar principle to his steam hammer.

Mr. J. Buchanan offered some observations on a new locking apparatus for carriages, which he illustrated by models. The suggested improvement arises from the introduction of the double pivot, which requires less room to turn the front wheels, and consequently gives increased space to the body of the carriage. He also exhibited some carriage-springs, the improvement in which was effected by the introduction of leather packing.

Mr. Gray enumerated a variety of experiments on iron bars, with a view to show that the want of due proportions in the several parts is productive of more or less danger.

Mr. Lucas followed, showing, by a description of a course of experiments, that iron becomes altered in its constitution by continual vibration.

'On Propelling Boats,' by Mr. Smith, in which the jet plan was advocated.

A paper 'On the Filtration of Water for the Supply of Towns,' by Mr. B. G. Slope, was read. The high pressure plan, through sand, was recommended.

To Correspondents.—F. T. S.—A Constant Reader—received.

Printed by JAMES HOLMES, of No. 4, New Ormond-street, in the county of Middlesex, printer, at his office No. 4, Took's Court, Chancery-lane, in the parish of St. Andrew, in the said county; and published by JOHN FRANCIS, of No. 14, Wellington-street North, in the said county, Publisher, at No. 14, in Wellington-street aforesaid; and sold by all Booksellers and Newsvenders.—*Agents:* for SCOTLAND, Messrs. Bell & Bradfute, Edinburgh; for IRELAND, J. Cumming, Dublin.—Saturday, October 26, 1844.